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A STUDY OF

Student Nurse Perception

OF

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

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A STUDY OF

Student Nurse Perception of patient attitudes

by

RENA E. BOYLE, R.N., PH. D.

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Public Health Service

FOREWORD

The Division of Nursing Resources* for many years has been intensely interested in improving hospital nursing services. Since one criterion of quality of service is afforded by the judgment of patients, we believe that nursing service might be improved if nurses were cognizant of patients' attitudes regarding their care. Consequently, we saw need for studies which would enable us to determine patient opinion and to assess the ability of nurses to perceive the attitudes of patients.

This subject was also of particular interest to Dr. Rena E. Boyle, a member of our staff. As a former teacher, Dr. Boyle had the impression that it was not easy for nurses to look at hospital practices from the viewpoint of the patient. She wanted to test this theory and was encouraged to design and develop a research project which would investigate many aspects of the problem. Since Dr. Boyle felt that it is far harder for teachers to evaluate nurse-patient relationships than it is to determine what students know about disease conditions or to rate their performance of procedures, she conceived a research project which would give both students and their patients an opportunity to state what aspects of nursing care seemed most important. The responses of patients were considered to be the correct responses, and the responses of the students were scored in terms of degrees of agreement with the attitudes expressed by patients.

The major participants in this study were 386 students enrolled in four diploma and three degree programs and 290 patients whom they selected as the patients they knew best. The schools were located in Massachusetts, New Jersey, Minnesota, and Washington.

We believe that the report contains much fascinating information which will be of value to not only the nursing profession but to social scientists, educators, psychologists, and others interested in the interpersonal relationships between the patients and nurses. Certain of the findings may shed light on where more emphasis can be placed in the basic nursing curriculum. Since the study method is one which can be used with other types of nursing personnel, we believe that it can provide much needed information concerning both patients and nurses.

APOLLONIA O. ADAMS

Special assistant for program planning
Division of Nursing

*When this study was conducted, Dr. Boyle served in the capacity of chief, Research and Consultation Branch, Division of Nursing Resources. That Division became the Division of Nursing, September 1960.

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Generous consultation was given by Dr. Ephraim Rosen, Professor, Department of Psychology, University of Minnesota and Dr. Godfrey Hochbaum, Chief, Behavioral Studies Section, Research and Development Branch, Division of General Health Services, U.S. Public Health Service.

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PART I

PILOT STUDY

The pilot study was conducted during the fall of 1956. The preceding months encompassed the frustration of developing an instrument which could be used with nursing students in various types of schools, and with patients who were subject to the highly unpredictable happenings of illness and hospitalization. To ignore this instrument developing phase of the study would be to present an unrealistic picture and leave unanswered many questions relating to the lack of rigorous controls over the selection of students, patients, and the clinical assignments of students. Consequently, the first half of Part I describes the proposed methodology and the factors which changed or influenced the original planning, and the second half describes the revision of method, analysis of data, and the findings of the pilot study.

Initial Statement of Problem

The problem for this research was originally defined as: *to determine the ability of nursing students to recognize the self-perceived needs of patients.*

The major concerns of the study were to determine:

1. The patient's perception of his need for information and assurance.

2. The student's perception of the patient's feeling of need for information and assurance.

3. The student's perception of her own feelings, "if she were a patient."

4. The student's statement with respect to the factors which influenced her recognition of, and provision for the patient's needs.

The study was not designed to ascertain the student's ability to recognize basic needs or motivations of patients, or her proficiency in planning total care. Neither was it an attempt to evaluate her skill in carrying out procedures.

Proposed Methodology

POPULATION

PATIENTS.—The decision to use medical and surgical patients was primarily the result of eliminating all other types of patients. The short hospitalization of obstetric patients would make it difficult for nurses in the labor, delivery, or postpartum wards to become well acquainted with mothers. The varying ages, diseases and responsiveness of children ruled out this group, and the responses of mentally ill patients would be difficult to evaluate. With these three groups eliminated, there remained only those medical and surgical patients who were willing to participate and who were mentally and physically able to respond to questioning.

THE NURSES.—Since professional nurses, practical nurses, nursing students, and aides might all be assigned to the care of medical and surgical patients, it was necessary to consider which group or groups would be included in the study. Of these groups, only nursing students were sufficiently alike in age, experience, and schooling to afford answers to the question, "Do all beginning student nurses possess similar ability to judge patient needs?" Even this group could only suggest answers, since students on medical and surgical wards would have been in the school several months before being assigned regularly to give patient care. It was subsequently decided to include all students—whether freshmen or seniors—in the pilot study. The school selected for the pilot study offered a diploma

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program in nursing, and had received temporary accreditation from the National League for Nursing. In these respects, it was similar to the majority of the diploma programs in 1956. Unlike most schools, however, it admitted two classes annually. One group of freshmen was assigned to medical and surgical wards in the spring and another in the fall. This made it possible to consider initiating a pilot study during the fall of 1956.

COLLECTION OF DATA

METHODS OF APPROACH.—Two approaches were suggested for collecting data relative to the self-perceived needs of patients. Both approaches seemed to present interesting possibilities as well as inherent problems. The one might be referred to as a "time-span," the other a "situational" approach.

"TIME-SPAN" APPROACH.—During a relatively nonstructured interview, the patient would be asked to tell about, "his day from breakfast until now," or "his day from noon until now." The material from the recorded interview with the patient would then be analyzed for the "self-perceived" needs of the patient. The interview with the student would be designed to elicit her perception of the patient's self-perceived needs.

The student would be assigned to give care to the patient for 2 or 3 days prior to the interviews with her and with the patient. The student's comments would be analyzed to determine the extent of agreement between the perceptions of the patient and those of the student.

"SITUATIONAL" APPROACH.—To obtain both the patient's perception of his need for information and assurance and the nurse's perception of the patient's self-perceived needs, it is desirable to focus the attention of both patient and student on patient-centered situations. For the purpose of this study, "patient-centered situations" would be those involving direct care to a patient, by a nurse, a doctor, or a doctor assisted by a nurse or technician.

The criteria which were suggested for selecting and limiting patient-centered situations were:

1. Patient-centered situations on the nursing station would be those where the patient's perception of need for information or assurance is related to:

   a. A treatment or procedure which is carried out by a nurse. The patient might at times assist the nurse (i.e., colostomy care, intramuscular injection).

   b. A treatment, examination or procedure for the patient which is carried out by a doctor assisted by a nurse (i.e., insertion of nasal tube, blood transfusion).

2. The situation should be limited to a relatively short period of time.

3. The situation should possess elements commonly disliked, dreaded, or feared by most patients. For example—dislike of exposure; dread of seeing a colostomy; fear of pain; etc.

4. The situation to be used, must be known to the patient and student

sufficiently in advance to permit the student nurse to have opportunity to care for the patient and for the interviewer to have opportunity to talk with the patient.

5. The situation should be as "typical" as possible—not structured to permit unusual opportunities for the nurse "to know" the patient.

6. The situation should be common to most hospitals in order that the study might be applicable to a fairly wide range of hospitals and schools.

7. The situation should not involve the general physical care of the patient since it would be difficult to focus either the patient's or student's attention on meaningful and comparable aspects of such care. For example, the procedure of "oral hygiene" might have relatively little significance to the patient but if all of the physical care which is included in "morning care" were used as a "situation," the patient might choose to discuss needs relative only to the bath, whereas the student's comments might relate only to the patient's needs for "oral hygiene."

It was suggested that patients to be interviewed might be selected in the following manner:

1. Use patients on adult medical and surgical units.
2. Use an equal number of medical and surgical patients.
3. Use an equal number of men and women patients.

It was also suggested that it might be possible to follow newly admitted patients and to use situations as they arose in the course of the hospitalization of these patients. If a blood transfusion were one of the first orders for a newly admitted medical patient, this might prove to be a usable situation providing that the patient knew that he was to have the transfusion; the student had had opportunity to give care to the patient; and the interviewer had opportunity to talk with the patient.

Exploration of Field and Factors Influencing or Changing Methodology

Following these first decisions relating to methodology, the study director visited the school and hospital in order: (1) To become acquainted with the school and hospital personnel; (2) to become familiar with the planning for student experience; (3) to have opportunity to talk with students and patients; and (4) to determine whether the study design would be applicable in the real situation.

ADMINISTRATIVE DETAIL

The administrative aspects of planning were discussed with the director of nursing. It was she who took the study director on a tour of the hospital, introduced her to the supervisors and head nurses, and made it possible to observe on the wards and talk with students and patients. The director of nursing talked

with the medical director and the hospital administrator and obtained permission to have recorded interviews with patients. Time of the study, scheduling of interviews, and office space were other matters discussed at this time.

The study director met with the faculty as a group, but talked with the head nurses, patients, and students when observing on the wards. The following questions served as a guide for obtaining the information desired.

QUESTIONS USED WHEN MEETING WITH FACULTY

1. When do students have experience on medical and surgical wards?

2. How are students assigned to the care of patients?

(a) Would the student who gave morning care to the patient: give the patient medications and treatments? accompany the patient to X-ray or operating room? know in advance that the patient was to have special treatments?

(b) How are patients assigned to students from 3 to 11 PM? (What nursing personnel are on the wards during this period?)

(c) Are students assigned to give care to the same patients on consecutive days?

3. Who admits patients to the wards?

4. Would you be able to rank the students with respect to their knowledge of patients, patients' needs?

5. How would you select patients whom the students would have opportunity to know reasonably well?

6. Is it preferable for interviewers to wear laboratory coats or uniforms on the ward?

QUESTIONS DISCUSSED WITH HEAD NURSES

1. How are patients assigned to students?

2. What patients do students know best?

3. May I talk with some of the patients in the ward?

QUESTIONS USED WITH STUDENTS

1. How long have you been on this ward?

2. What is your assignment today?

3. What patients do you feel you know best? And of these, which patient do you know best?

4. What has he told you about himself, the hospital, his work, his family?

5. Has he talked with you about his illness? About various medications or treatments he has had?

6. How much do you think he knows about his condition?

7. What plans does he have for going home?

8. What would this patient consider as his "needs"? (or) What concerns him most?

9. How did you get this information?

10. What do you think is the best way to get to know patients' attitudes about their illness?

QUESTIONS USED WITH PATIENTS

Patients were asked to respond to one of two types of questions:

1. Will you tell me about your morning? (or) Will you tell me about your day? What did you do? (or) How did you put in your time? What did doctors and nurses do for you?

2. Will you tell me about your present illness? Have you been here long? Have you been a patient before? What do you feel is most important to you in your care? In the ward itself?

The second type of questioning proved to be more productive than the first in eliciting self-perceived needs of the patients.

GENERAL NATURE OF PATIENTS' COMMENTS

The patients talked freely and expressed both satisfactions and dissatisfactions and spoke of some of the ever-present worries which concerned them.

It was important to have nurses who were friendly, cheerful, and pleasant and most of the nurses were all three. They liked the students, for students were nice to everyone, "even the disagreeable patients." The doctors were good; they explained everything—why you should cooperate, why you should have surgery, and what the medicines would do for you. It would be nice if the nurses explained things, but they weren't allowed to, and anyway, they were always so busy. The Salvation Army people and the minister were frequently and gratefully mentioned.

And for the negative? There was no privacy no matter how much it was wanted. Old men shouldn't be next to the young ones; they had nothing in common. It wasn't right to put dying patients next to those getting well, for it was hard to be around dying patients.

They wanted attention and understanding. "No one is really concerned about you, yet all of us need to feel important." "It's not that I want sympathy, but it's a relief to have someone to talk to." "They can't understand why I'm grouchy, but you would be too, if no one ever talked to you." "You have to shout to get attention and some patients are so weak they can't make the nurses hear."

"There's nothing to do." "I read the Bible and comics, and talk to some of the patients who are up." "Mostly, you just lie here and think and worry."

And what did they worry about? The cost of medicines; a husband at home with no one to cook for him; the cost of a phone bill or rent or no pension; a husband so arthritic he couldn't walk alone to the clinic—yet no carfare.

And there were worries about "what next?" "Where will they send me? I don't have a home. Sure, I have brothers and sisters but there's no room for me." "When can I go back to work? I've just got to, for it's weeks since my husband had a job." "My granddaughter is starting school this week, and I want so much to be with her." And on and on—ad infinitum.

What care was important? All of it "that the doctor ordered," but for most patients, the backrubs, food, and medicines, which were frequently mentioned.

STUDENT COMMENTS ABOUT PATIENTS

The students were concerned with the pressures of their own assignments and spoke chiefly of the patients' "complaints" about the food and about nothing to do. They characterized patients by such comments as:

"He's a very cooperative patient so he gets good care."

"She's a good patient, follows orders, takes all of her medicines and tries not to bother us."

"He's hard to please, hollers and complains, and refuses medicines even though we've tried to explain."

"He takes his illness nicely, understands his condition, and accepts it. He's no trouble."

By the end of the week it was obvious that if one were to work within the existing framework of the school and hospital, little could be salvaged of the initial statement of problem and proposal for data collection. Observation, interviews, and group meetings each revealed the inappropriateness of the previous proposals, but the single factor which most drastically changed the design was the nature of the students' assignments. The physical environment presented another complicating and unanticipated factor.

STUDENT ASSIGNMENTS

FUNCTIONAL ASSIGNMENTS.—Both freshmen and seniors were given functional assignments, even though an attempt was made to have the freshmen student give complete care to the patient she was using for a care study. Some students were assigned to give baths and make beds, others to give medications and treatments.

EVENING ASSIGNMENTS.—Students assigned to evening duty were in charge of a ward of 26 to 36 patients and assisted by an aide or orderly. Even though the assignment was of 4 to 6 weeks length, the student did not remain on the same ward each night but relieved on various wards when graduate nurses had

their nights off. They felt that they knew the medications and treatments ordered on the wards but that they did not know the patients as people.

CONTINUITY AND TYPE OF ASSIGNMENTS.—It was not usual for the students to be assigned to the same patients on consecutive days. They did not admit patients, nor accompany them to X-ray or surgery. They might or might not assist with various nursing procedures.

DECISIONS RELATING TO SELECTION OF PATIENTS

The faculty felt that the freshmen students and seniors would know a great deal about the patients they selected for "case" studies, and about the patients discussed in the ward conferences. They did not feel that they would know any other patients very well. In order that all students might know the patients "reasonably" well, it was decided that the selection of patients would be made by the students. It was further agreed that students assigned to evening or night duty would not be included in the study.

THE PHYSICAL ENVIRONMENT

ELECTRIC CURRENT.—The electric current of the hospital was D.C. and the few outlets in each ward were needed for suctions and other similar equipment. This meant that all tape recorders used with patients would have to be battery operated. Those used in the nurses' residence could be connected at A.C. outlets.

PRIVACY.—The wards afforded minimal privacy for patients. Neither curtains nor screens would be available to separate patients being interviewed from the patients or personnel of the ward, and a blatant intercommunication system would be an additional source of interruption.

DECISIONS REGARDING DATES AND LENGTH OF STUDY

Since a maximum number of students (both seniors and freshmen) would be having experience on medical and surgical wards in November, it was decided to return and conduct the study at that time. It was estimated that there would be 50 students on these wards in November. If interviews were conducted with these students and with two patients selected by them this would constitute a total of 150 interviews. It also seemed desirable to try to interview all students within a relatively short period of time in order to avoid some of the effect of having the comments of the students first interviewed influence the statements of the students who would be interviewed later.

DECISIONS REGARDING IDENTIFICATION OF INTERVIEWERS

The faculty and nursing service personnel felt that it would be preferable to wear laboratory coats rather than uniforms when talking with patients. They reasoned that patients would be less likely to feel that they were saying things they shouldn't say about nurses or nursing, and that the interviewers would be less likely to be asked by patients and doctors to assist with nursing activities.

Revision of Problem and Method

The situation described previously made it necessary to revise both problem and method since it was quite obvious that the student had minimal time to become familiar with the "self-perceived" needs of patients, and that neither the "time-span" nor "situational" approach would be appropriate. Since the investigator did not want to study an artificial situation, the study changed in emphasis and became, "A study to determine the ability of the student nurse to identify the importance ascribed by her patients to certain aspects of hospital care."

During the next weeks, many discussions were held with Division of Nursing Resources staff members and many excellent suggestions were forthcoming. Since the investigator was concerned with obtaining comparable data from patients and students, the technique which seemed most promising was the card sort. The development and use of the sort are described in the following pages.

THE CARD SORT

ITEM CONTENT AND SOURCES.—Three major criteria governed the construction of items. Each item should: (1) sample patients' attitudes about one of the three selected aspects of hospital care; (2) obtain information which the student could normally ascertain while caring for patients; and (3) have similar meaning to patients and nurses.

The item content was suggested by four primary sources: (1) the recent interviews with patients and students; (2) the patient care study of the Division of Nursing Resources, 1956[1]; (3) Schmidt's study of problems encountered by students[2]; and, (4) the previous nursing experience of the investigator.

FORM OF ITEMS.—There was disagreement among the Division staff as to the wording of items. Some felt that patients and students would respond more freely if each item were a complete sentence with an impersonal subject (i.e., most patients would like to be permitted to smoke.) The study director preferred the incomplete sentence (i.e., to be permitted to smoke). It was decided that both forms would be used during the Pilot Study.

The complete sentence form was used for only 2 days of the study. Both of the interviewers who used it with patients stated that although the patients

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[1] Abdellah, Faye G. and Levine, Eugene, "Effect of Nurse Staffing on Satisfactions with Nursing Care." Hospital Monograph Series No. 4, American Hospital Association, Chicago, 1958.

[2] Schmidt, Mary, "A Curricular Study of Psychological Problems Encountered by Students in the Basic Professional Program in Nursing." University of Pittsburgh, 1948.

were more than willing to talk about "most patients," they invariably wound up by saying, "but as for me—." Consequently the interviewers felt that this wording confused the patient and complicated the use of the card sort.[3] Perhaps because of her initial bias, the study director found the "most patients" form of the question extremely troublesome to use with students. The students seemed more than pleased to respond to "most patients" and to parrot what they had learned in class. It was annoyingly time consuming to have to listen to this response to each item and still have to ask, "And do you think Mrs. X would also feel that it is *important*?"

RESPONSE CATEGORIES.—It was decided to use four response categories: "very important," "important," "less important" and "not important." The category "not important" was changed to "unimportant" with one group of students and to "wouldn't apply" with another. Neither rewording proved to be as easily understood by both patients and students. Another labelling of response category which was used in the Pilot Study was: "strongly agree," "agree," "disagree," "cannot say." This proved to be a more difficult wording for both patient and student.[4]

FREE VERSUS FORCED CHOICE.—Knowing the interest in, and controversy about the Q-sort technique as it has been used by Stephenson and others, it was necessary to decide whether or not to employ it in the present study. Although a forced normal distribution would facilitate the statistical treatment of data, the forced choice technique has not been used in this study. Permitting both patient and student to place as many items as they desire in any of the four categories was acceptable to the study director because the items are of such a nature that any one patient might feel that nearly all of the items were "important" or "very important" to him. A forced choice would instead, compel both patient and student to place as many items in the "not important" as in the "very important" category. Since patients differ markedly in their stated opinions about the aspects of hospital care which are of concern to them, it would seem that a forced choice technique would adversely affect the student's perception of her patient's opinions.

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[3] One interviewer said: "I prefer the other sorting of cards to 'most people.' The incomplete sentence seems to effect a more direct and personal approach. Sometimes when the patients filed the cards, I did not know whether they filed them according to how 'they felt about it,' or how they thought 'the other patients' would feel about it. As you can see from the records, the results are much more monotonous."

[4] The written comments of one of the interviewers regarding the labelling of categories and wording of questions were: "I disagree with the change of categories to 'Agree,' 'Disagree' etc. There is not as much variation as I could get from patients when they stated it was 'Important' or 'Not Important' to them. Patients do not identify themselves as much with *agree* as with *important*."

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It was apparent that it would create an artificial situation to ask the patient to place a specified number of items in each of many categories and then to expect the student to both identify the general importance and name the specific importance of each item to her patient.

Mowrer supports the preference for free choice most ably.

"Another effect of the usual Q sort is that differences in scatter within profiles are eliminated from consideration. This may be psychologically indefensible, if there is reason to think that persons differ in their variability over traits. Moreover, such equalizing of scatter vastly increases the error of measurement in Q correlations for persons who have little true variability (flat profiles)." [5]

USE OF CARD SORT.—It was during this period that Dr. Godfrey Hochbaum questioned the use of the card sort as the sole method of determining the student's perception of patients' attitudes. He pointed out that the comparison of the student's sort for the patient and the patient's sort for himself would yield only a measure of agreement as to the importance of each item to the patient. A needed next step was to determine not only the importance of the items to the patient but also the patient's satisfaction with the situation described by each item. The method of using the card sort was the result of these discussions. It was agreed that the interviewers would be instructed to consider that both student and patient had to make two decisions—(1) how important is the item to the patient (the actual placement of the card); and (2) is the patient satisfied? The second step has afforded students and patients the opportunity to discuss their feelings about the hospital care and environment and has many times explained their placement of items.

PRETESTING OF ITEMS.—The card sort was initially composed of 54 items, which were first used within the Division. Various personnel were asked to recall previous hospital experiences and to sort the items "as if they were patients." Some items were revised four and five times, and it was the occasional item which remained unchanged. The items were then pretested, by Dr. Hochbaum and the study director, at the Alexandria Hospital and School of Nursing, Alexandria, Virginia. Subsequently the card sort was reduced from 54 to 36 items. In its initial form, the length of the sort was tiring to the patients and the meaning of certain items was unclear.

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[5] Mowrer, O. H. *Psychotherapy: Theory and Research*, The Ronald Press, New York, 1953, p. 379.

FORMS FOR COLLECTION OF DATA

The forms for recording data were of simple design and easy to use. Since all interviews were tape recorded, the forms were used to: (1) indicate that interviews with patients and students had been completed; (2) make the responses of students and patients immediately available for tabulation and analysis; and (3) conserve all essential information if the tape recordings were not clear or if they were lost. The interviewers were instructed to check the form at the time the patient or student placed each card in the box. They were to place a check in the space denoting the importance of the item and encircle the check if the patient were dissatisfied. For example:

Item	Very important	Important	Less important	Not important
1.....	.....	✓	.....	.....
2.....	.....	.....	✓	.....
3.....	✓	.....	.....	.....

The above diagram shows the use of the form if the patient had sorted item 1 as "Important," item 2 as "Less important," and item 3 as "Very important." The marking of item 3 also shows that the patient expressed dissatisfaction.

TAPE RECORDERS

Two types of battery recorders were used during the first week of interviewing patients. Because of the extreme sensitivity of the one machine to the many extraneous noises in the ward situation, it was impossible to continue to use this recorder despite the fact that it was the easier to operate and to service.

INTERVIEWERS

SELECTION.—It was estimated that the interviews with students and patients could be completed within a period of 3½ weeks if the study director had three assistants. Because of the short duration of the study period, it was decided to employ part-time workers who might consider this a valuable learning experience. A job description was written for "student assistants," graduate students majoring in clinical psychology, who had had courses and some experience in interviewing. The study director corresponded with Dr. Stuart Cook, head of the Graduate Psychology Department of New York University and made the preliminary arrangements for contacting interviewers and for scheduling a training session prior to the study.

Only two graduate students were available despite the very excellent publicity given the study by several professors in the graduate psychology department.

TRAINING.—The purpose of the study and plan for the interviews were described by the study director. Dr. Hochbaum discussed the nature of the interview and he and the study director used role playing to demonstrate an interview with a patient. Neither interviewer was familiar with the use of tape recorders. Following the demonstration of the use of recorders, each recorded a practice interview with a patient and then listened to the tapes and discussed the interviews with Dr. Hochbaum and the study director. During the first week of the study, the study director and interviewers again listened to parts of recordings and talked about some of the questions which had arisen during the interviews with patients. The university classes of the interviewers conflicted with the hours scheduled for interviewing nursing students. Consequently all interviews with students were conducted by the investigator.

Collection and Analysis of Data

WORDING OF ITEMS

Although the majority of the items were unchanged, a few were reworded for clarity or to better fit the situation. During the second week, the form of the items was changed in order to note the patients' and students' responses to items when they were worded in a less personal form and as complete sentences (i.e., first week: "How important is it to you to be permitted to smoke?" Second week, "Most patients would like to be permitted to smoke. Would you strongly agree, agree, disagree or strongly disagree?") The interviewers found that the "*Most Patients*" form was the more difficult to use and caused greater confusion for both patient and student.

NUMBER OF INTERVIEWS

Forty-four students (16 seniors, 13 juniors, and 15 freshmen) were interviewed during the pilot study. Whenever possible the student selected two patients and completed the card sort for each of them. Most students found it difficult to select a second patient and 11 were unable to do so.

Of the 49 individual patients interviewed and completing the card sort, each of 5 was selected and described by 2 students, each of 2 was selected by 3 students, and 1 patient was selected by 5 students. Fourteen patients could not be interviewed. Nine were too ill or senile; 3 refused; 1 had a serious language problem; and 1 had been discharged. The 9 patients who were too ill or senile were over 60 years of age.

The total of 63 student sorts provided data for comparison with the card sorts completed by patients.

DETERMINATION AND COMPARISON OF SCORES

"Discrepancy" score.—The response of the student was compared with that of the patient and the difference between the responses was indicated by a discrepancy score. Values ranging from 0 to 3 indicated the difference between student and patient responses. The method of determining the discrepancy score is shown below.

	Importance of item				
Items	Very important	Important	Less important	Not important	Discrepancy score
1.....	Patient response.	.....	Student response.	.....	2
2.....	.....	Patient and student response.	.....	.....	0
3.....	Student response.	.....	.....	Patient response.	3
4.....	.....	Patient response.	Student response.	.....	1

The "discrepancy" score for each item might also be thought of as a "distance" score since it denoted the scale distance between the patients' and students' responses (i.e., when the patient and student agreed, 0; when one said it was Important and the other Less Important, 1; etc.) Since the number of items in the sort was not held constant throughout the pilot study, raw scores were converted to percent to permit even crude comparison of the scores earned by various students.[6]

"Dissatisfaction" score. Recognition of dissatisfaction was determined by counting the number of times the student correctly anticipated that the patient would respond to items in a negative or dissatisfied manner. This method of scoring was not satisfactory since it did not take into account the number of times the student recognized or failed to recognize that the patient would respond in a positive or satisfied manner.

"Comparison" scores. The scores earned by the students were compared with those earned by their classmates and with those earned by students in other classes.

REVIEW OF ITEMS

Each item was reviewed to determine whether its meaning was clear to both patients and students. Both transcriptions and actual recordings were used for this purpose.

[6] Thirty-six items were used during the first week, 30 the second week, and 33 the third week of the study.

The student's responses to the items of the questionnaire, "If I Were a Patient," were compared with her responses for the patient and with the patient's responses to determine to what extent the student "projected" her own attitude or "recognized" the importance of the item to the patient.[7]

Figure 1 shows how a student's responses to five items were classified. Only two of the five responses could be labelled as either "recognition" or "projection."

Figure 1.—Classification of student's responses as "projection," "recognition," or "unknown."

Item	Importance of item to—			Classification of response	Explanation
	Patient	Student for patient	Student for self		
1	*Very important*	*Very important*	*Very important*	Unknown	Since all sorts agree, the student may either "project" her own feelings or *"recognize"* those of her patient.
2	*Important*	*Important*	Not important	Recognition	Since the student's response for the patient *agrees* with the patient's but does not agree with her own—this is termed "Recognition."
3	Not important	Important	Very important	Unknown	Since all sorts disagree, it would be difficult to know how the student arrived at her response for the patient.
4	Less important	*Very important*	*Very important*	Projection	Since the student's response for the patient *does not* agree with the patient's response, but does agree with her own—this is termed "Projection."
5	*Very important*	Not important	*Very important*	Unknown	Since the student's response for the patient *does not* agree with the patient's response or with her own response, it would be impossible to classify her response for the patient.

[7] Recognition: Whenever the student's estimate of the importance of an item to her patient *agreed* with the importance assigned by the patient, but *did not agree* with the value which she, herself, had assigned, the response was classified as "recognition." Projection: Whenever the student's estimate of the importance of an item *did not agree* with the importance assigned by the patient, but *did agree* with the value which she, herself, had assigned, the response was classified as "projection."

The relative importance of items to patients and to students was determined by calculating the proportion of responses assigned by both groups to each of the four response categories.

Findings

Since the analysis and treatment of data were necessarily crude because of the many changes made during the study, the findings of the pilot study were considered as interesting hunches which could serve as basic assumptions for subsequent study.

DISCREPANCY SCORES

1. There were marked differences among students in their ability to recognize the importance of items to their patients. Discrepancy scores ranged from 16 to 56 with a mean of 33.

2. Seniors and juniors were better able to recognize the importance of items to their patients than were the freshmen.

Discrepancy scores

	Number	Mean score	Range
Seniors	16	31	16–50
Juniors	13	31	16–42
Freshmen	15	37	26–56

DISSATISFACTION SCORES

The number of items with which patients expressed dissatisfaction ranged from 0–19 with a mean of 8.4.

Students agreed with their patients on 23 percent of these responses (114/498).

USE OF "RECOGNITION" AND "PROJECTION."

Students with low discrepancy scores (high agreement with patients) employed "recognition" more often, and "projection" less often than did students earning high discrepancy scores. See table 1.

Table 1.—Classification of responses of students with high and low discrepancy scores

Number of students	Classification of response			
	Recognition		Projection	
	Number of items	*Percent of items*	*Number of items*	*Percent of items*
10 earning high discrepancy scores	30	8.8	98	28.7
8 earning low discrepancy scores	73	30.2	41	16.9

RELATIVE IMPORTANCE ASCRIBED TO ITEMS BY PATIENTS AND STUDENTS

Students attributed less importance to items than did the patients. This was true both when the students sorted the items as they thought patients would sort them and when they responded for themselves. "If I Were a Patient." See table 2.

Table 2.—Importance ascribed by patients and students to items of card sort

Respondents	Very important		Important		Less important		Not important	
	Number of items	*Percent of items*	*Number of items*	*Percent of items*	*Number of items*	*Percent of items*	*Number of items*	*Percent of items*
Patients responding for "self"	891	44.0	589	29.1	343	16.9	202	10.0
Students responding for "patients"	423	20.9	783	38.7	482	23.8	336	16.6
Students responding for "self"	475	33.0	630	43.7	281	19.5	55	3.8

CLARITY OF ITEMS

The transcriptions and recordings indicated the need for further clarification of items. Twelve items were revised, five deleted and two new items were added. The revised sort consisted of 34 items which were used in the next phase of the study.

STUDENTS' ESTIMATION OF PATIENTS' AGES

Students were more apt to underestimate than to overestimate the ages of their patients. The actual ages were determined from the records of 60 patients. Students gave the correct age of 19 patients, underestimated the age of 25 patients and overestimated the age of 16 patients.

Contribution of Pilot Study

The primary contribution of the pilot study was the development of a technique which could be used to determine the extent of agreement between the perceptions of patients and students. Specific outcomes of the pilot study were:

1. Thirty-four items which could be used with medical-surgical patients and with students.

2. A method of comparing student and patient responses which yielded a discrepancy score. Since a high discrepancy score represented the least agreement between student and patient, it was difficult to interpret. (Following the pilot study, the scoring was revised to show *agreement* and all subsequent scores were agreement scores.)

3. A somewhat unsatisfactory method for determining patient dissatisfaction was by the use of followup questions, ("Do they do this?" or, "Are you permitted to .....?").

4. A more satisfactory plan for:

(a) recruiting, selecting and training interviewers.

(b) acquainting school and hospital personnel with the purpose of the study.

(c) helping students select patients who were physically and mentally able to be interviewed.

(d) the use of tape recordings.

5. The basic assumptions for the continuation of the study.

The pilot study also demonstrated the feasibility of carrying out a study which required the participation of students and patients and the cooperation of the nursing, medical and administrative personnel of the hospital.

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PART II

THE STUDY

During the past decade much progress has been made in selecting students who are interested in the health fields, who are academically able to achieve success and who will graduate and take their places in one of the many areas open to them. Although these students have had similar courses and experiences, and have had much emphasis placed on the psychological and emotional aspects of illness, they differ markedly in their relationships with patients and in their awareness of patients' attitudes. But these differences are not limited to student groups, for among our associates there are those who find it difficult to look at hospital practices and personnel from the viewpoint of the patient.

Both general impressions and controlled observation indicate that it is not easy for the nurse to look at hospital practices from the viewpoint of the patient. Yet, it is the patient's viewpoint which is reflected in his confidence in personnel, his readiness to learn about his condition and his satisfaction with the quality of care. Hence it becomes extremely important and timely to develop instruments which will assess the ability of the nurse to recognize both the similarities and differences of attitudes displayed by her patients.

Statement of Problem and Purpose

The pilot study for this project, conducted during the fall of 1956, was concerned with the development of a technique for measuring the ability of the student nurse to recognize the importance and satisfaction ascribed by her patient to selected aspects of hospital care. It was not concerned with determining the student's ability to recognize the patient's underlying needs and motivations nor in her proficiency in planning for the total care of the patient. Furthermore, no attempt was made to evaluate the student's technical skill in carrying out selected nursing procedures.

Although the pilot study afforded a method of selecting students and patients and a technique which could be used to determine the extent of agreement between the perceptions of patients and students, there was obvious need for further refinement of techniques and for the testing of hypotheses. During subsequent phases of the study, an attempt was made to: (a) assure a more systematic collection of information regarding patient satisfaction, (b) secure more adequate information about the patient population, and (c) identify the sources used by the students to obtain information about their patients. The hypotheses to be tested related to the ability of freshman and senior nursing students to recognize the importance which patients attribute to various aspects of hospital care and the satisfaction of these patients with their care. It was assumed that differences in ability would be reflected in the scores earned by freshman and senior students when they responded to test items regarding the patients whom they knew best.

In retrospect, it seems almost incredible that it was possible to complete a study which was dependent upon the careful planning of so many people in various parts of the country. The directors of the schools of nursing and nursing service arranged for the study director to plan in advance with faculty and nursing service personnel. They discussed the proposed study with the hospital administrator and medical personnel, and scheduled individual and group conferences with students. In addition, it was the directors who made the interviewers feel that they were welcome in both school and hospital, and at a later date, made it possible for the study director to return and discuss with them the findings of the study.

Participants

The selection of participating schools was influenced by many factors. However, the final decision reflected the desire to include schools which offered both diploma and degree programs, which on the basis of experience and best judgment, appeared to be representative of the expressed philosophies of teaching,

clinical experience, and health care in three regions of the country. In these respects, it was felt that the schools in the South would not differ markedly from those in the East, Midwest and West. It was believed that if the study techniques were used with the students in these schools and the patients selected by them, it would result in findings which would support or disprove the hypotheses derived from the pilot study, and permit generalizations to be made from these findings.

The clinical assignments of students restricted both the study period and the number of schools which could be included in the study. It was not until the spring quarter of the year, that first-year students had had sufficient contact with patients to judge their attitudes, or that senior students were again assigned to medical-surgical wards.

The maximum number of schools which could be used during the spring quarter of any year was limited to four. It was estimated that the study would require approximately 2 weeks for each school to allow adequate time for meetings with students and staff, orientation of interviewers, and interviews with students and patients. To permit the maximum use of interviewers who could be trained as a group, it was advantageous to select two schools in the same vicinity.

SCHOOLS AND HOSPITALS

Three schools were asked to participate in the spring of 1957, and four in 1958. Four of these schools offered programs leading to a diploma in nursing, and three, to a baccalaureate degree. The students were assigned to hospitals of various types and control. The seven schools and nine hospitals which cooperated in the study are briefly described in table 1.

STUDENTS AND PATIENTS

The major participants in the study were 386 students enrolled in the 4 diploma and 3 degree programs, and the 290 patients whom they selected.[1] All students who were assigned to medical and surgical wards at the time of the study participated.[2] The 282 first-year students [3] were distributed among the 7 schools but the 104 seniors were enrolled in 4 schools. Three schools did not have seniors on medical or surgical wards at the time of the study.

The method of selecting patients has remained a problem throughout the study. Optimally, the investigator would have controlled the selection of patients and would have specified the number of days or hours the student was to be assigned to give care to the patient. The rapid discharge of patients and the practices of both hospitals and schools made such control impossible. Student assignments varied from one ward to another even within the same hospital.

[1] Since in some instances a patient was selected by more than one student, the number of students exceeds the number of patients.

[2] In one school, two groups of first-year students, one-half of the class, were having vacations and were not available at the time of the study.

[3] The term "first-year student" refers to students having their first year of clinical experience. In the diploma programs, these students were freshmen; in the degree programs they were sophomores or juniors.

Table 1.—Schools and hospitals participating in study

School and hospital name and location	Type of nursing program	Total number of students in school Oct. 1957	Average daily patient census Aug. 1957	Ownership of hospital	Accreditation status at time of study
Harrison S. Martland Medical Center and School of Nursing, Newark, N.J.	3-year diploma	227	570	City	Temporary.
Northwestern Hospital and School of Nursing, Minneapolis, Minn.	3-year diploma	212	239	Nonprofit	Full.
Massachusetts General Hospital and School of Nursing, Boston, Mass.	3-year diploma	402	733	Nonprofit	Full.
Newton-Wellesley Hospital and School of Nursing, Newton Lower Falls, Mass.	3-year diploma	158	174	Nonprofit	Full.
Seattle University School of Nursing and Providence Hospital, Seattle, Wash.	14-quarter (degree)	147	286	Nonprofit; church operated.	Full.
University of Minnesota School of Nursing and Hospitals, Minneapolis, Minn.	16-quarter (degree)	206	502	State	Full.
University of Washington School of Nursing, Seattle, Wash.		313			Full.
King County Hospital	17-quarter (4-year degree).		347	County	
Swedish Hospital	Basic Nursing		294	Nonprofit	
Virginia Mason Hospital	Research 12 or 15 quarters.*		174	Nonprofit	

*At the end of the 12th quarter, students are eligible for the Certificate in Nursing or may continue with the last year of program and be eligible for the degree of Bachelor of Science in Nursing.

Some were assigned to the complete care of a few patients; others the partial care of many patients, or the giving of medications and treatments to all patients. Then, too, students' classes or "days off" frequently interrupted or terminated their care of a particular patient, and it was not unusual for a student to remark that she really didn't know any patient very well. Consequently, the students were asked to select the patients whom they "knew best," and it was only by indirect evidence that it was possible to determine that the patients did not present unlike problems to students.

INSTRUCTORS, HEAD NURSES, AND SUPERVISORS

Other participants were 24 instructors and 58 head nurses and supervisors in five schools and hospitals who completed the questionnaires, "Most Patients Want." The instructors were those who taught, or were primarily responsible for the instruction in introductory nursing, medical and surgical nursing. The head nurses and supervisors were those responsible for the medical and surgical units of the hospital where the students had their practice. Although the instructors in all schools completed these questionnaires, comparable information was not collected from the head nurse groups in four hospitals.

INTERVIEWERS

Graduate students were employed to interview students and patients. Eleven were majoring in the fields of psychology, sociology, or human relations, and 13 in nursing. In Minneapolis and Boston, both men and women, nurses and nonnurses, served as interviewers. In Seattle, the interviewers were nurses. The study director was assisted in Newark by a psychologist from the Division of Nursing Resources, while in Seattle and Boston two Public Health Service nurses were assigned to help with the study.

Instruments

THE CARD SORT

The primary concern of the pilot study was the development of a technique which could be used to measure the ability of the student to recognize the importance ascribed by her patient to selected aspects of hospital care. It was during this phase of the study that the decision was made to construct items which could be used as a card sort to determine the attitude of the patient about his care, and the student's perception of the patient's attitude.[4] Perhaps the greatest single advantage of the use of the card sort was the possibility of making direct comparison of student and patient responses rather than a comparison of the students' responses with those of many patients. Since an interviewer controlled the card-

[4] See description of pilot study. Part 1 page 10.

sort situation, it was possible to make certain that both patient and student maintained the same frame of reference throughout the card sort.

The card sort afforded a common stimulus to both patient and student, limited the number and type of responses, and made it possible to measure the extent of agreement between the nurse and her patient. In constructing the items, it was necessary to select words which would have similar meaning to patients and nurses, to avoid items which might cause the patient to be fearful of future treatments or care, and to sample information which the student could normally obtain while giving care to patients.

The 34 items of the card sort sampled three aspects of hospital care: Environment, both physical and social; Physical Care; and Information and Assurance.[5] The items used in the card sort are listed in Appendices A and B.

INFORMATION COLLECTED BY CARD SORT.—The card sort was used to collect two types of information: The first, the satisfaction of the patient with the situation described by each item; the second, the importance of each item to the patient. To obtain the first type of response, the statements were worded as complete sentences [6] and the respondent was instructed to answer, "Yes" or "No" to each of the 34 items. To secure the second type of information, the statements were worded as incomplete sentences [7] and the respondent was asked to indicate whether the item would be, "Very Important," "Important," "Less Important," or "Not Important" to him.

MATERIALS USED FOR CARD SORT.—The items were printed on 3" by 5" cards. One deck of cards was used for the "Yes-No" sort and another for the "Importance" sort. After reading each card of the first deck, the respondent placed it in either a "yes" or "no" pile. For the "Importance" sort, a wooden box was divided into four sections. Each section was identified by both label and color to correspond with one of the four possible responses. (Very Important, *red;* Important, *blue;* Less Important, *yellow;* Not Important, *green*).

ADMINISTRATION OF CARD SORT.—Since the student selected the patient, it was necessary that the interview with the student precede that with the patient. The interviewer asked the student which patient she had selected and instructed her to respond to each of the "yes-no" items as she thought the patient would respond "today." Following this sorting of items, the student was asked to consider each of the other set of items in terms of its importance to her patient (i.e., "How important would it be to Mr. Jones, 'to have the room or ward quiet?' ") She would then place the card in the appropriate section of the box. Having responded to both sorts as she thought the patient would respond, the student

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[5] The term "assurance" refers to actions or events which may afford the patient a feeling of confidence or security.

[6] i.e. "The room (or ward) is quiet."

[7] i.e. "To have the room (or ward) quiet."

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answered other questions regarding the selection of the patient, her liking for him, and the number of opportunities which she had had to know the patient.

The interview with the patient was conducted in a similar manner, and the patient too, was instructed to respond to each item as he felt "today," not as he might have felt during some other period of his illness. Whenever possible, the interview with the patient was the same day as that with the student. In order that the interviewer would not unconsciously bias the patient's response, at no time did the same interviewer talk with the student and with the patient selected by that student.

ITEM ANALYSIS.—Items were analyzed to determine: (1) the proportion of students recognizing the importance of each item to their patients, (2) which items best discriminated between high and low scoring students.

The item responses were also grouped by areas (Environment, Physical Care, Information and Assurance) and analyzed to determine whether it was equally difficult for students to recognize the importance to their patients of each of the three areas.

SCORING OF RESPONSES.—Each student's answers were compared with *those of the patient whom she knew best*.

The "*Yes-No*," or "*Satisfaction*" Score: The score for this sort is a percentage score based on the total number of times the student anticipated correctly the "Yes-No" answers of the patient.

The "*Importance*" *score:* In scoring the Importance sort, the student was given a score of 3, when her response *matched* that of the patient; a score of 2, if her response *did not match* that of the patient but did recognize the general feeling expressed; and a 0, when her response and that of the patient fell on opposite halves of the scale. The total possible points for the Importance sort was 102. To illustrate the scoring, examples of student and patient responses are diagrammed for items 1, 2, and 3.

	Very important	Important	Less important	Not important	Score
Item 1.....	.....	.....	Patient response.	Student response.	2
Item 2.....	Patient and student response.	.....	.....	.....	3
Item 3.....	.....	Patient response.	Student response.	.....	0

QUESTIONNAIRES

1. "*If I Were a Patient*".—After completing the interviews with both students and patients, the students who had participated in the study were asked to respond to the questionnaire, "If I Were A Patient." The questionnaire items were worded in the same manner as those used in the "Importance" sort. The student was instructed to imagine herself as a patient and to decide how important each item would be to her. By matching the student's two responses—Importance for self, with Importance for her patient—it was possible to determine the extent to which the attitudes of the student were similar or dissimilar to those which she ascribed to her patient.

Scoring and use of response: The students' responses to the questionnaire items were compared with *her responses* for the patient whom she selected. The method of scoring the paired responses was the same as that used for the "Importance" sort. The coefficient of correlation was determined to show the relationship between the scores on the "Importance" sort and the scores on the questionnaire, "If I Were A Patient."

2. "*Most patients*".—Following the use of the card sort with students and patients, the instructors in medical, surgical, and introductory nursing responded to the items in questionnaire form. They were asked to estimate the importance of each item to "most" medical and surgical patients in their hospital.

At a still later date, head nurses and supervisors on medical and surgical wards in five of the hospitals completed the questionnaires as they thought "most" of the patients on their wards would respond.

The questionnaire responses of instructors, head nurses and supervisors were compared with the combined responses of students to attempt to determine whether students were better, equally, or less able to predict the responses of *particular patients*, than were the faculty who responded for *patients in general*.

3. *Comparison of student, head nurse, and faculty response.* In order to compare the actual responses of the patients with: (1) the combined responses of the students, (2) the answers of the faculty for "most" patients, and (3) the responses of supervisory personnel for "most" patients, an arbitrary value was assigned to each of the four Importance categories. (Very important, 4; Important, 3; Less important, 2; and, Not important, 1). It was then possible to compute the mean value assigned to each item by each group of respondents and rank each group in relation to the closeness of these values to those of the patients.

FREE RESPONSE

At the beginning of the study period in each school, the investigator met the students as a group, talked with them about the study and the selection of patients, and then asked them to "List the things which would be most important to you (if you were a patient) in the medical care, nursing care, or environment." Students were free to list a few or as many items as they wished and to spend

whatever amount of time they desired writing their responses. It was anticipated that the unstructured responses of the students would provide additional evidence of the relative importance which students attribute to these three aspects of hospitalization.

RATING SCALE

During the second year of the study, the interviewers were asked to complete a rating scale for each patient whom they interviewed.[8] It was hoped that these ratings would provide additional information about the types of patients selected by students and the ease or difficulty of talking with, or eliciting information from them. Following the card sort, the interviewer rated six characteristics of the patient's behavior on a 5-point scale and indicated whether or not the patient had responded to the items in a superficial or offhand manner.

The interviewers' ratings were summarized and used as supplementary descriptive material concerning the patient population.

[8] The rating scale, "Interviewer's Rating of Patient's Behavior During Interview" is shown in Appendix D.

Figure 1.—Summary of techniques

Instrument	Respondents				Scoring or use
	Patients	Students	Instructors	Head nurses and supervisors	
CARD SORT:					
1. "Yes-No" sort (would *the patient* answer "*Yes*" or "*No*" to each item)?	X	X	.....	.....	Agreement between student and patient responses provided a "*Yes-No*" or *Satisfaction* score. (See p. 28)
2. "Importance" Sort (How important is each item to *the patient*)?	X	X	.....	.....	Extent of agreement between student and patient response provided basis for "Importance" Score. (See p. 28)
QUESTIONNAIRES:					
1. "If I Were A Patient." (How important would each item be to you *if you were a patient*)?	.....	X	.....	.....	Student response for self matched with her estimate of "Importance" for her patient. Scored to indicate extent of agreement. Correlation determined between scores on "Importance" Sort and "If I Were A Patient." (See p. 29)
2. "Most Patients Want" (How important would each item be to "Most" medical and surgical patients)?	.....	.....	X	X	Determined average value assigned by each group of respondents. Ranked groups of respondents in relation to *closeness* to patients responses. (See p. 29)
FREE RESPONSE:					
What things would be important to you if you were a patient?	.....	X	.....	.....	Unstructured responses of students compared with "Importance Assigned to Items in Questionnaire"—"If I Were A Patient." (See p. 29)

Basic Questions and Assumptions

Although the focus of the study was the development, refinement and use of a technique, the following questions and assumptions which were based on the pilot study were explored when collecting and analyzing data from the 1957–58 schools.

TYPES OF PATIENTS SELECTED BY STUDENTS

1. How do students describe the patients whom they "know best"?

2. From what sources do students obtain information or cues which enable them to know how the patient will respond to the various items?

3. How do interviewers describe the patients?

No assumptions are stated with respect to the foregoing questions since there was no attempt to systematically collect this information until the second year of the study. By that time, the study director anticipated that the students would describe the patients as friendly and cooperative and expected them to state that talking with patients was the usual source of information about patients.

RECOGNITION OF IMPORTANCE

1. Do students differ in their ability to recognize the importance attributed by patients to selected aspects of hospital care?

If such differences exist, it is assumed that they will be reflected in differences in the test scores earned by: (a) students in the same school, (b) students in various schools, (c) first-year and senior students, (d) first-year students in diploma vs. first-year students in degree programs.

2. Do students differ in their ability to recognize the importance ascribed by their patients to items relating to: (a) environment, (b) physical care, and (c) information and assurance? [9]

If differences exist, it is assumed that they will be reflected in the percentages of students who overestimate or underestimate the importance of each of these areas to their patients.

3. To what extent are the attitudes of students similar to those which they ascribe to their patients?

If students respond for their patients as they themselves would respond to the items of the card sort, there will be a fairly high positive correlation between the scores earned by students on the "Importance" sort and their scores on the questionnaire "If I Were a Patient."

4. Do students' responses for their patients reflect the attitudes learned from teachers and supervisory personnel rather than the attitudes expressed by their patients?

[9] The term "assurance" refers to actions or events which students say afford the patient a feeling of confidence or security.

If this is true, students' responses for selected patients will be the same as the teachers' and supervisors' responses for "most patients."

5. Does the percentage of agreement between student and patient responses remain constant for each of the four response categories (Very important, Important, Less important, and Not important)?

It was postulated that students would agree with their patients more frequently when patients said that the items were *Very important* or *Important* than when they said that items were *Less important* or *Not important*.

6. What is the degree of relationship between recognition of importance, as evidenced by the "Importance" score and (a) high school rank, (b) grades in nursing, (c) rank in clinical practice, (d) opportunities to know patients, and (e) hours of clinical practice?

It was hypothesized that students who earned high "Importance" scores would rank high in clinical practice and have had recent, frequent, and "good" opportunities to know patients. Although a common assumption, it was not hypothesized that students who earned high "Importance" scores would have ranked in the upper one-fourth of their high school class or have earned the highest grades in nursing courses.

RECOGNITION OF SATISFACTION

1. Do students differ in their ability to recognize patient satisfaction?

If differences exist, it is assumed that they will be reflected in the "Yes-No" scores earned by students (a) in the same school, (b) in various schools, since these scores indicate agreement between the student and patient responses.

2. What is the degree of relationship between "Importance" scores and "Yes-No" scores?

It was assumed that there would be a fairly high positive correlation between the "Importance" and "Yes-No" scores earned by students.

3. Is it easier to recognize patient dissatisfaction when the patient also states that the item is *Very important* to him, than when the patient says that the item is *important*, *less important*, or *not important* to him?

It was assumed that the answer to the foregoing question would be "yes," since it was believed that patients would make their dissatisfaction more obvious about those aspects of hospital care which they considered of greatest importance.

Statistical Techniques

Various statistical techniques were employed in making comparisons within and among schools. Analyses of variance techniques were used to test the homogeneity of groups both within and among schools with respect to the "Importance" scores earned by the students. The T-test was used: (1) to determine the statistical

significance of correlation coefficients and (2) to test the significance of the difference between two means. Chi-square tests were used in instances involving two or more frequency distributions to indicate the probability of getting a difference equal to or greater than that which was observed.

In the foregoing instances, tests of significance were applied to data which do not meet certain of the specifications for the use of these tests. The schools included in the study were not randomly selected but at this point there is no reason to assume that the schools in the region not studied would differ markedly from the schools selected as representative of the other three regions. In other words, if the study were to be replicated in other schools, we would not expect radically different findings from those of this study.

It has seemed warranted to use tests of significance for the following reasons:

1. The tests provide the reader with a descriptive measure of the strength of the relationship between variables. By indicating an arbitrary point (a confidence level), the reader is enabled to say that he will accept a difference of a given magnitude as having more likelihood of being important in interpretation than a difference of lesser magnitude. Without the assistance of such tests, each reader would inevitably make his own judgment of importance of differences and might attach significance to differences which are of minimal magnitude, or fail to recognize those differences which are of greater magnitude.

2. The use of the tests justifies generalizing from the findings, with a certain degree of probability, to the universe from which it is believed that these schools and these nurses were drawn. The results of the tests have a certain usefulness, even when the requirements for randomization are not met, in the sense that they may support the prediction that if the study were repeated, similar findings could be obtained. The significance test may thus be used to predict not merely to the hypothetical universe but to a sample taken from this hypothetical universe.

Findings

The findings reported in this section afford answers to certain of the questions which were investigated, support many of the assumptions relating to recognition of importance and fail to support those which relate to recognition of satisfaction. Inferences drawn from these findings are reported in a subsequent section.

GENERAL CHARACTERISTICS OF PATIENT POPULATION

These findings are based on information collected in 1958 and though comparable information is not available for the patients interviewed in 1957, there seemed to be few differences between the two groups.

Of the 153 patients interviewed in 1958, there were 85 women and 68 men. Half of the patients were medical, half surgical. Four-fifths of the patients were

over 40 years of age and two-thirds had had previous hospital admissions (appendix C, page 68).

The illnesses of the patients were quite typical of the usual patient populations of general hospitals. Roughly one-third of the disease conditions were diagnosed as "malignant."

STUDENTS' DESCRIPTIONS OF PATIENTS.—Students were asked if they liked the patients whom they selected "very much," "some," or "not at all." Four-fifths of the students said that they liked their patients "very much," one-fifth replied, "some," and a single student said, "not at all." When the average Importance scores earned by these students were compared by use of the T-test, the mean score of the students who responded "some" was significantly higher than the mean score of those who liked their patients "Very much." (See table 2.)

Table 2.—Comparison of importance scores earned by students who liked patients "very much," or "some"

	Student likes patient	
	Very much	Some
Number of students	167	36
Mean score	62.1	67.4
Standard deviation	9.83	7.59
Standard error of the mean	.76	1.28

Note.—Applying the T-test, the difference between the mean scores is significant at the .01 level.

Students were also asked, "Can you tell me why you feel this way about this patient?" Students most frequently described the personality of the patient as friendly, cooperative or compliant, but occasionally stated that the patient was helpful or not demanding. A few students said that the patient had interests or hobbies similar to their own, or was like their father or mother. In some instances, the patient's condition or adjustment appealed to the student and the students expressed pity, sympathy, or admiration. In other instances, the students derived personal satisfaction, help or understanding from their contacts with the patient. Relatively few students mentioned concern in helping patients with problems, in using sources for referral or in acquiring information about the patient's disease. The number of students responding in the various ways indicated are shown in table 3, page 36.

Table 3.—Importance scores and description of patients whom students like "very much," "some," "not at all."

Student description of patient	Student likes patient [1]			
	Very much		Some	
	Number of students	Mean importance score	Number of students	Mean importance score
All Students (1958)	**167**	**62.1**	**36**	**67.4**
Personality: Pleasing, cooperative, compliant, not demanding.	122	62.7	31	67.9
Emotional appeal: Pity, sympathy, admiration.	19	59.7	1	60.0
Personal satisfaction: Patient is understanding of student, or helpful to student.	11	62.2	.....	.....
Identifies with patient: Patient is like student or student's parents. Patient has similar interests or hobbies.	9	61.3	.....	.....
Recognizes or assists with patient's problems.	6	59.0	3	66.3

[1] Only one student replied, "Not at all" and stated also that the patient was demanding.

ESTIMATE OF AGE.—It is usually assumed that students know the ages of their patients since age is prominently recorded on both chart and Kardex and is considered when discussing the nature and prognosis of the illness, the operative risk, plans for rehabilitation and the patient's return to home and work situations. Three-fourths (288) of the students gave either the correct patient age or misjudged it by less than 5 years. Despite the accessibility of such information, 94 students, one-fourth of the total group, misjudged the age of their patients by 5 to 25 years and underestimated the actual age far more often than they overestimated it. (Table 4).

For study purposes, students were asked to avoid selecting elderly patients who might be confused by questioning and give unreliable responses. This was stressed more during the second than during the first year of the study and this emphasis may account for the greater proportion of 1958 students who knew the age of their patients. (Table 5).

Table 4.—Number of years by which students underestimate or overestimate age of patients

	Number of students underestimating age				Number of students overestimating age			
	1–4 years	5–9 years	10–14 years	More than 15 years	1–4 years	5–9 years	10–14 years	More than 15 years
All students	65	36	19	10	65	19	8	2
1957 students	31	25	14	7	25	9	5	2
1958 students	34	11	5	3	40	10	3	.....

Table 5.—Students' estimates of age of patients

	Number of students making estimate	Exact estimate of age		Underestimate of age		Overestimate of age	
		Number	Percent	Number	Percent	Number	Percent
All students	382 [1]	158	41.0	130	34.5	94	24.5
1957 students	178 [1]	60	34.0	77	43.0	41	23.0
1958 students	204	98	48.0	53	26.0	53	26.0

[1] Four students did not estimate age of patients.

Sources of Information.—During the second year of the study, students were asked, "Where have you gotten the information you used in answering the questions?" Almost without exception the students mentioned the patient, but less than half said that information had also been obtained from the patients' charts. This data confirmed a belief based on the first year's experience, that students did not use or consider patients' records or other personnel as a major source of information about patients. (See table 6, page 38.)

Inasmuch as the students knew in advance that they would be asked to tell us about the patient they knew best, and were asked to be thinking about whom they would select, it would appear that neither first-year nor senior students regarded records as a primary source of information about patients' likes or dislikes.

It is unlikely that the hospital records did provide this type of information; yet if nurses are expected to know their patients, it would be helpful to find such statements on the patients' charts.

Table 6.—Sources of information used by students

Source of information	Number of students mentioning		Total
	First source of information	Second source of information	
	204	112	
Patient	175	25	200
Chart	25	65	90
Doctors	2	3	5
Nurses		10	10
Other personnel	2	9	11

INTERVIEWERS' RATINGS OF PATIENT BEHAVIOR.—The interviewers' ratings indicated that the patients were willing to participate and that it was relatively easy to talk with them. A few patients appeared to be fatigued by the interview but the majority were not. Although most patients seemed interested and volunteered some information, the majority asked few questions and demonstrated a somewhat compliant attitude. Since patients were selected by the students, this in itself may have eliminated patients who would have been less willing to take part in the study. Perhaps of even more significance is the evidence that it is possible to carry on this type of interview within the general hospital setting. (See appendix for Summary of Interviewer Ratings.)

RECOGNITION OF IMPORTANCE

"IMPORTANCE" SCORES—DIFFERENCES AMONG STUDENTS AND SCHOOLS.—1. There were significant differences among the mean scores earned by students in the various schools. (Table 7.)

Table 7.—Importance scores[1] earned by 386 students in seven schools of nursing[2]

School	Number of students	Mean score	Range	Standard deviation
All Schools[3]	386	61.9	40–87	8.9
A	34	60.3	41–83	10.1
B	59	61.5	43–78	7.8
C	89	59.9	44–78	7.5
D1	14	64.1	45–87	10.0
D2	22	65.1	49–82	9.9
D3	16	64.4	40–77	9.3
E	20	69.5	55–81	7.8
F	57	63.9	45–80	7.6
G	75	59.7	42–81	9.3

[1] Scores derived by comparing student's responses for her patient with the patient's responses on the "Importance" sort.

[2] Using analysis of variance, it is necessary to reject the hypothesis that there are no significant differences among the mean scores of students in the various programs. (The calculated value of F is 4.56 whereas the corresponding value at 1 percent point in the F Table is 2.51.)

[3] Students enrolled in school D are assigned to three hospitals (D1, D2, D3) for nursing experience.

2. Differences between the "Importance" scores earned by first year and senior students were not significant. (Table 8.)

Table 8.—Importance scores[1] earned by first-year and senior students

School	First-year students				Senior students			
	Number of students	Mean score	Range	Standard deviation	Number of students	Mean score	Range	Standard deviation
All Schools[2]	282	62.1	40–87	9.2	104	61.2	43–80	8.1
A	34	60.3	41–83	10.2	.....	.....	.....	.....
B	41	62.6	48–78	7.5	18	59.2	43–71	7.1
C	59	59.7	44–78	7.8	30	60.3	48–74	7.0
D	52	64.6	40–87	9.7	.....	.....	.....	.....
D1	(14)	(64.1)	(45–87)	(10.0)	.....	.....	.....	.....
D2	(22)	(65.1)	(49–82)	(9.9)	.....	.....	.....	.....
D3	(16)	(64.4)	(40–77)	(9.3)	.....	.....	.....	.....
E	20	69.5	55–81	7.8	.....	.....	.....	.....
F	30	63.4	48–78	7.8	27	64.4	45–80	7.9
G	46	59.2	42–81	9.8	29	60.3	43–80	9.8

[1] See footnote 1, previous table.

[2] See footnote 3, previous table.

3. The difference between the mean scores earned by students enrolled in diploma and degree programs was significant at the 1 percent level. This difference is small and the overlap between groups sufficiently great that the difference is of no practical significance.

Table 9.—Importance scores earned by students in diploma and degree programs

	Data for students	
	In diploma program	In degree program
Number of students	255	131
Mean score	60.8	64.0
Standard deviation	7.4	8.8
Standard error of the mean	.46	.77

NOTE.—Applying the T-test, the difference between the mean scores is significant at the .01 level.

4. The "Importance" scores earned by students selecting the same patients did not differ significantly from the scores earned by students selecting different patients. More than one student frequently selected the same patient in schools C, F, and G. The number of times that more than one student selected the same patient is shown in table 10.

Table 10.—Number of patients chosen by only one student or by more than one student[1]

Number of students choosing each patient	Total patients chosen in all hospitals	Hospitals								
		A	B	C	D1	D2	D3	E	F	G
Only one	228	24	43	39	12	20	14	20	34	22
Two	39	2	8	10	1	1	1	.....	7	9
Three	15	2	.....	6	.....	.....	.....	.....	3	4
Four	6	.....	.....	3	.....	.....	.....	.....	.....	3
Five	1	.....	.....	.....	.....	.....	.....	.....	.....	1
Six	1	.....	.....	.....	.....	.....	.....	.....	.....	1

[1] Students chose the patient whom they knew best; consequently, in some instances, the same patient was selected by more than one student.

Table 11.—Comparison of scores earned when two or more students selected the same patient with those earned by students selecting different patients

	Importance scores earned	
	When two or more select the same patient	When students select different patients
School C:		
Mean	59.3	60.7
Range	44–78	46–74
Standard deviation	8.0	6.9
School F:		
Mean	64.0	63.8
Range	52–77	56–85
Standard deviation	7.4	8.0
School G:		
Mean	59.4	60.4
Range	42–80	43–81
Standard deviation	8.9	10.5

NOTE.—Applying the T-test, the difference between the mean scores is not significant.

ESTIMATES OF IMPORTANCE OF ENVIRONMENT, PHYSICAL CARE OR SELF ACTIVITY, AND INFORMATION AND ASSURANCE.—When students did not agree with their patients, they were more apt to *overestimate* the importance which patients would ascribe to the area of "Environment." (See table 12, page 42.)

Students in hospitals D2 and G reversed this distribution of response by underestimating the importance of a larger proportion of these items.

Students tended to *underestimate* the importance of "Physical Care or Self Activity" items when they disagreed with patient (exception D3). (See table 13, page 42.)

Table 12.—Student estimate of importance of "environment" items to patient

School	Number of student responses to environment items	Percent of student responses		
		Agreeing with patient's response	Underestimating patient's response	Overestimating patient's response
All Schools...	3859	38.7*	25.7*	35.6*
A.....	340	35.3	27.3	37.4
B.....	590	38.7	22.0	39.3
C.....	889	35.1	20.7	44.2
D1.....	140	41.4	23.6	35.0
D2**.....	220	44.1	32.3	23.6
D3.....	160	36.9	18.1	45.0
E.....	200	42.5	22.0	35.5
F.....	570	38.9	30.7	30.4
G**.....	750	35.7	34.7	29.6

* Unweighted average.

** The frequency distribution of student responses in this school is significantly different from the average distribution found in other schools. Chi-square is significant at the .01 level.

Table 13.—Student estimate of importance of "physical care or self activity" items to patient

School	Number of student responses to physical care or self activity items	Percent of student responses		
		Agreeing with patient's response	Underestimating patient's response	Overestimating patient's response
All Schools...	4246	43.7*	32.1*	24.2*
A.....	374	41.2	31.8	27.0
B.....	649	42.2	31.8	26.0
C.....	979	40.9	30.7	28.4
D1.....	154	45.4	33.8	20.8
D2.....	242	50.4	33.1	16.5
D3**.....	176	44.3	21.0	34.7
E.....	220	50.5	27.7	21.8
F.....	627	41.0	37.7	21.3
G.....	825	37.8	39.5	22.7

*Unweighted average.

**The frequency distribution of student responses in this school is significantly different from the average distribution found in other schools. Chi-square is significant at the .01 level.

In the area of "Information and Assurance," when students were not in agreement with their patients, they *underestimated* a larger percentage of responses. To the contrary, students in schools D3 and E *overestimated* a greater proportion of responses when they did not agree with the patients. (Table 14).

Table 14.—Student estimate of importance of "information and assurance" items to patient

School	Number of student responses to information and assurance items	Percent of student responses		
		Agreeing with patient's response	Underestimating patient's response	Overestimating patient's response
All Schools...	5016	40.6*	32.1*	27.3*
A.....	442	38.9	30.8	30.3
B.....	767	39.1	30.5	30.4
C.....	1155	37.6	30.2	32.2
D1.....	182	38.5	31.3	30.2
D2.....	286	43.4	40.2	16.4
D3**.....	208	44.7	23.6	31.7
E**.....	260	43.5	24.6	31.9
F.....	741	40.6	39.1	20.3
G.....	975	39.0	38.2	22.8

*Unweighted average.

**The frequency distribution of student responses in this school is significantly different from the average distribution found in other schools. Chi-square is significant at the .01 level.

ESTIMATES OF FIRST YEAR VS. SENIORS.—Except for School G, the differences between first-year and senior responses were not significant for any of the three areas. In school G, however, the freshmen students underestimated a significantly greater proportion of patients' responses in all areas than did the senior students. Chi-square values were significant at the .01 level for each of these areas. (See table 15, page 44.)

Table 15.—Student recognition of patient attitudes

Percentage of senior and first-year students underestimating or overestimating importance of categories of environment, physical care, and information and assurance to patients

A. Environment

School	Number	Percent of seniors			Number	Percent of first-year students		
		Agreeing	Underestimating	Overestimating		Agreeing	Underestimating	Overestimating
All schools	104	35.2	27.3	37.5	282	38.2	26.5	35.3
B	18	36.7	23.3	40.0	41	39.5	21.5	39.0
C	30	34.7	25.0	40.3	59	35.3	18.5	46.2
F	27	34.5	34.8	30.7	30	43.0	27.0	30.0
G	29	37.2	27.6	35.2	46*	34.8	39.1	26.1

B. Physical care and self-activity

School	Number	Percent of seniors			Number	Percent of first-year students		
		Agreeing	Underestimating	Overestimating		Agreeing	Underestimating	Overestimating
All schools	104	42.5	35.1	22.4	282	39.2	35.4	25.4
B	18	47.0	31.3	21.7	41	40.1	32.0	27.9
C	30	38.8	35.5	25.7	59	41.9	28.4	29.7
F	27	40.7	41.4	17.9	30	40.6	37.0	22.4
G	29	43.3	32.3	24.4	46*	34.4	44.1	21.5

C. Information and Assurance

School	Number	Percent of seniors			Number	Percent of first-year students		
		Agreeing	Underestimating	Overestimating		Agreeing	Underestimating	Overestimating
All schools	104	39.0	32.0	29.0	282	39.1	36.1	24.8
B	18	39.3	26.1	34.6	41	39.0	32.5	28.5
C	30	36.9	33.6	29.5	59	37.9	28.5	33.6
F	27	41.3	37.0	21.7	30	40.0	41.0	19.0
G	29	38.5	31.3	30.2	46*	39.3	42.5	18.2

* Chi-square values were significant at the .01 level for this distribution of response.

PROJECTION OF STUDENT ATTITUDES.—The extent to which the students' responses for their patients reflected the students' attitudes rather than those of their patients, differed from one school to another.

The coefficient of correlation was used to determine the extent of agreement between the "Importance" scores (based on the student's agreement with her patient) and the "Student for Self" scores (based on agreement between the student's response for her patient and her responses to the questionnaire, "If I Were a Patient"). The correlation between scores earned by students in all schools was r = .366, whereas the range was from r = .167 to r = .647. (Table 16).

Table 16.—Correlation between "importance" scores derived by: 1. Matching students' responses for their patients with their patients' responses; 2. their own responses to questionnaire "If I were a patient."

School	Number of students	Value of coefficient of correlation
1957 schools	**180**[1]	**.308****
A	34	.330
B	57[1]	.453**
C	89	.222**
1958 schools	**204**	**.366****
D1	14	.647*
D2	22	.529*
D3	16	.388
E	20	.387
F	57	.401**
G	75	.167

[1] Two students in school B did not complete the questionnaire, "If I Were a Patient."

* Value of r is significant at the .05 level.

** Value of r is significant at the .01 level.

The relatively unstructured responses of the students which were obtained prior to specific questioning provided other evidence of the importance which the students themselves assigned to the three aspects of hospital care. More than one-half of their responses pertained to the environment, roughly one-fourth to physical care and one-fifth to information and assurance. (See table 17.) The items relating to environment were further classified as social or physical, with 635 responses relating to the social and 396 to the physical environment.[10] Despite their number, the responses relating to the social environment were quite

[10] See Appendix G.

limited in nature, since 517 of the 635 pertained to friendly, cheerful, hospital personnel, and to understanding or knowing patients as people.

Table 17.—Importance ascribed by students to environment, physical care, information and assurance

[Summary of free responses][1]

All areas	Number of free responses	Percent
Total	**1960**	**100.0**
I. Environment	**1031**	**52.6**
Physical	396	20.2
Social	635	32.4
II. Physical care	**540**	**27.6**
Given by Nurse	488	24.9
Self Activity	52	2.7
III. Information and assurance	**389**	**19.8**
Information	226	11.5
Assurance	163	8.3

[1] The students in each school were asked to: "List the things which you think would be most important to you (if you were a patient) in the medical care, nursing care or environment." See appendix G for the specific items listed.

ESTIMATES OF STUDENTS, INSTRUCTORS, AND SUPERVISORS.—Students' estimates of the importance of items to the patients whom they knew best were closer to the importance assigned by their patients, than were the estimates of either the instructors, head nurses or supervisors for most patients.

This, more than any other piece of evidence, is justification for the use of the card sort and suggests that students were not answering in a random fashion. If students had been responding or guessing in terms of what "most" patients want, their estimates should have been no closer to the responses of the patients than were the estimates of the faculty and supervisory personnel.

Data were collected in 5 of the 9 hospitals from 24 instructors, 58 head nurses and supervisors, and compared with the responses of students. The students' estimates were, in most instances, those closest to the responses of the patient. Only in the area of physical care did the head nurses' estimates come closer to the

patient than did those of the students. The head nurse-supervisor and instructor groups assigned a higher value to physical care items than did the patients, whereas the seven groups of students in the five schools attributed less importance to these items than did the patients. (Table 18).

Table 18.—Average importance attributed to each of three areas by patients, students, head nurses and instructors [1]

Area I: Environment

School and class	Patients (N=200) mean value	Students (N=200) mean value	Head nurses [2] (N=58) mean value	Instructors (N=24) mean value
B first-year	2.8	3.0	3.1	3.3
Seniors	2.9	3.0	3.1	3.3
C first-year	2.5	3.0	3.2	3.4
Seniors	2.8	3.0	3.2	3.4
D1 first-year	2.9	3.1	3.4	3.3
D2 first-year	3.0	3.0	3.2	3.5
D3 first-year	2.8	3.1	3.3	3.4

Area II: Physical Care

School and class	Patients (N=200) mean value	Students (N=200) mean value	Head nurses [2] (N=58) mean value	Instructors (N=24) mean value
B first-year	3.0	2.9	3.0	3.4
Seniors	2.9	2.7	3.0	3.4
C first-year	2.9	2.9	3.5	3.4
Seniors	3.1	2.9	3.5	3.4
D1 first-year	3.2	3.0	3.2	3.0
D2 first-year	3.1	2.9	3.2	3.4
D3 first-year	2.8	2.9	3.2	3.0

[1] Average importance was calculated by assigning arbitrary values to each of the four Importance Categories and determining the Importance assigned to items in each of the three areas. Very Important=4; Important=3; Less Important=2; Not Important=1.

[2] Head nurses—includes both head nurses and supervisors on medical, surgical units.

Table 18.—Average importance attributed to each of three areas by patients, students, head nurses and instructors [1] (Cont'd.)

Area III: Information and assurance

School and class	Patients (N=200) mean value	Students (N=200) mean value	Head nurses [2] (N=58) mean value	Instructors (N=24) mean value
B first-year	3.0	3.0	3.2	3.3
Seniors	3.0	3.0	3.2	3.3
C first-year	2.8	2.9	3.1	3.3
Seniors	3.0	2.9	3.1	3.3
D1 first-year	3.1	3.1	3.6	3.2
D2 first-year	3.2	2.9	3.3	3.3
D3 first-year	3.0	3.1	3.2	3.4

All areas

School and class	Patients (N=200) mean value	Students (N=200) mean value	Head nurses [2] (N=58) mean value	Instructors (N=24) mean value
B first-year	2.9	2.9	3.1	3.3
Seniors	2.9	3.0	3.1	3.3
C first-year	2.8	2.9	3.3	3.4
Seniors	3.0	2.9	3.3	3.4
D1 first year	3.1	3.1	3.4	3.2
D2 first-year	3.1	2.9	3.2	3.4
D3 first-year	2.9	3.1	3.2	3.3

[1] Average importance was calculated by assigning arbitrary values to each of the four Importance Categories and determining the Importance assigned to items in each of the three areas. Very Important=4; Important=3; Less Important=2; Not Important=1.

[2] Head nurses—includes both head nurses and supervisors on medical, surgical units.

For the seven groups of students in the five schools a test was made of the rank order of the scores of the students, head nurses, and instructors in relation to the closeness of these scores to those of the patients. This was done for each of the three areas. If there were no systematic ordering of scores, it would be equally likely that each category of respondent would score as close to the patients as any of the other categories. Thus each school would present a different pattern of rank orders.

In the areas of Environment and Information and Assurance, there was a distinct ordering of responses in most of the schools. The scores of students were closest to patients, the head nurses' scores were next closest, and the instructors were furthest away. This pattern appeared in school after school. It is so persistent as to be highly unlikely that it could be due to chance alone, since the probability of getting such a consistent ordering of scores purely by chance is much less than .01.

In the area of Physical Care, the consistency of rank orderings does not appear. Instead a variety of patterns exist. In none of the schools is found the typical pattern of the other areas in which students score closest to patients, head nurses next, and instructors last.

Agreement by Category of Importance

The percentage of agreement between student and patient does not remain constant for each of the four response categories. Students agreed with 42 percent of the patient responses when patients said that the items were very important; 45 percent of the important responses; 35 percent of the less important; and 20 percent of the responses when the patient classified the items as not important. (See table 19.)

Table 19.—Student recognition of importance of items when patients' responses are classified by category of importance

Category of importance	Number of patients' responses	Recognized by students	
		Number	Percent
Total	12,509	4,961	39.7
Very important	4,440	1,860	41.9
Important	5,000	2,253	45.0
Less important	1,531	543	35.4
Not important	1,538	305	19.8

Other Variables

(a) High school rank.

The mean Importance score of students who ranked in the second quarter of their high school class was somewhat, but not significantly, higher than that of students who ranked in the upper quarter of their class. That this held true for seven of the eight groups for which high school rank was available makes this a finding which cannot be ignored despite the relatively small difference between mean scores. (Table 20.)

(b) Rank in clinical practice.

There was no consistent pattern of relationship between Importance scores and rank in clinical practice. (Table 21.)

(c) Opportunities to know patients.

Differences in Importance scores could not be attributed to the number of hours per week of clinical experience since there was little difference in the range of scores from one school to another but marked differences in the number of hours of practice. (Table 22.)

The total number of opportunities and the number of opportunities to know patients in the 5 days immediately preceding the interviews were reported by the students. Even when quality of opportunity was weighted, there was no demonstrable relationship between opportunity to know patients and the Importance scores earned by the students.

Table 20.—Importance scores and rank by quarter of high school class [1]

School	Rank not available	Rank by quarter of high school class									
		Total		Highest or 1st quarter		2d quarter		3d quarter		Lowest or 4th quarter	
	Number of students	Number of students	Mean importance scores	Number of students	Mean importance score	Number of students	Mean importance scores	Number of students	Mean importance score	Number of students	Mean importance score
All schools	67	301	61.3	191	60.9	82	62.3	15	57.9	13	64.4
A	.....	34	60.3	11	58.9	15	60.1	2	55.5	6	65.0
B	8	[2] 33	62.3	27	61.5	6	66.2	.....	.....	.....	.....
C	2	87	59.8	67	59.9	19	59.7	1	57.0	.....	.....
D 1	8	6	61.3	5	60.6	1	65.0	.....	.....	.....	.....
D 2	9	13	66.5	8	64.5	4	68.9	.....	.....	1	74.0
D 3	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
E	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
F	4	53	64.5	38	64.2	10	67.0	2	62.0	3	61.7
G	.....	75	59.7	35	58.3	27	61.7	10	57.7	3	62.7

[1] Although the mean Importance score of students from the second quarter of their high school class is higher than the mean Importance score of students from the first quarter, this difference is not statistically significant.

[2] High school rank was not obtained from the senior students in this school.

Table 21.—Importance scores and rank in clinical practice

School	Rank in clinical practice					
	Upper quarter		Middle half		Lower quarter	
	Number of students	Mean scores	Number of students	Mean scores	Number of students	Mean scores
All Schools	94	62.5	183	61.8	91	61.8
First-year students:						
A	5	59.0	24	62.0	5	53.6
B	11	62.0	20	62.7	10	62.9
C	15	61.3	31	57.9	13	62.0
D 1	5	62.8	6	65.5	3	63.7
D 2	5	65.4	12	65.2	5	64.6
D 3	4	69.5	8	61.2	4	65.5
E	4	71.0	10	70.0	6	67.5
F	7	66.6	16	62.7	7	61.7
G	11	57.5	24	59.9	11	59.5
Seniors:						
C	8	63.2	15	60.1	7	57.4
F	7	62.4	13	64.0	7	67.1
G	7	63.1	15	59.5	7	59.3

Table 22.—Importance scores and hours per week of clinical experience

School	First year		Seniors	
	Hours per week	Mean scores	Hours per week	Mean scores
A	28	60.3	.....	.....
B	30	62.6	30	59.2
C	6	59.7	36	60.3
D	30	64.6	.....	.....
E	22	69.5	.....	.....
F	30	63.4	36	64.4
G	8	59.2	30	60.3

RECOGNITION OF SATISFACTION

It is possible to state quite conclusively that the "Yes-No" sort does not reflect the patient's true feeling about an existing situation or his satisfaction with care. Evidences of this are:

1. Patients would often say that the nurses didn't do the things indicated by a "yes" response, yet would insist on placing the card with the "yes" cards (i.e., the nurses take enough time to talk with me. "No, not really, but I know how busy they are, so I guess it's 'yes'.")

The students, in turn, would sometimes make comments similar to those of the patients, and contrary to the actual situation (i.e., "No, the nurses don't come promptly, but I think he'll say they do. He likes the nurses and knows how busy we are.")

2. The proportion and distribution of "yes" responses seemed to support the feeling that the sort is biased in a direction favorable to hospital personnel. Patients sorted 84 percent of the items as "yes."

When the nurse or doctor was the subject of the sentence, less than 15 percent of the patient responses were "no." Twelve of the 34 items were worded in this way. When the patient or other people were the subject of the sentence, the percentage of "no" responses increased markedly, ranging from 16 to 62 percent for 10 of the 18 items so stated.

3. There was no significant relationship between the "Importance" and "Yes-No" scores earned by the students. The mean correlation for students in all schools was $r = .051$, and the range was from $r = .032$ to $r = .312$.

4. Student recognition of patient dissatisfaction (patients' "no" responses) was greater when the patients also said that these items were "Less Important" or "Not Important" than when the patients said that the items were "Very Important" or "Important." This finding was contrary to the initial assumption. (Table 23.)

Table 23.—Student recognition of patient dissatisfaction when patients' "no" responses are classified by category of importance—1958 schools only

Category of importance	Number of patients' "no" responses	Recognized by students	
		Number	Percent
Total	945	557	58.9
Very important	281	152	54.1
Important	257	138	53.7
Less important	188	125	66.5
Not important	219	142	64.8

Interpretation and Implications of Findings

Although the present study has been primarily concerned with the development of a technique to obtain comparable information from students and patients, the implications of certain of the findings should stimulate the thinking of both faculty and hospital personnel.

SCORES OF FIRST YEAR AND SENIOR STUDENTS

The similarity between the Importance scores of senior and first-year students tends to support the opinion that the ability to recognize patients' attitudes is not markedly influenced by the school. Rather, one might assume that certain students possess greater empathic ability than do others and that any effort to improve this ability must be directed toward helping the student recognize the many personal and situational factors which may alter the individual patient's perception of his care.

Perhaps it is the verbal facility of the senior which is often times misleading to both casual observers and to instructors. In one school, interviews were scheduled with seniors the first week, with freshmen the second. By Tuesday of the second week, each of the interviewers had commented upon the differences between the two groups. The seniors really knew their patients and what they would say; the freshmen were uncertain, had to think about each item, and still didn't know what the patient would answer. The interviewers were so very certain that these differences were real that they did not bother to compare student and patient responses. They "knew" that the seniors would agree more closely with the patients than would the freshmen. Yet despite their certainty, the scores of the seniors were little different from those of the freshmen.

Some of the lack of differences among first-year and senior students might be attributed to situational factors rather than to individual differences. Few students felt that they had adequate opportunity "to know their patients." Younger students would say that they were on the wards so few days or hours each week that they never got to know their patients. Older students who were team leaders stated that they just couldn't know patients as well when they were team leaders as when they had more time to care for patients; and students who were assigned to medicines and treatments, or who were having evening or night experience, said that their contacts with patients were so minimal that they knew little about them as people.

Perhaps instructors, too, tend to accept with greater confidence the smoothly worded statement of the senior student than the more halting, less confident comment of the freshman. Even though the planning of experiences for both groups is of importance there is seemingly much need for periodic evaluation of the students' estimates of patients' attitudes.

ESTIMATE OF AGE

The findings with respect to age will warrant further consideration if students in general, as well as those included in this study, tend to underestimate the age of their patients. Perhaps students are in need of additional help in observing the physical manifestations of aging and in recognizing the difference between the reminiscing of the elderly person and the action-laden speech of the younger adult. It could also be worthwhile to explore the connotation of the words which students use when they describe patients. During the interviews, it was not uncommon for a student to speak of the "middle-aged" man in his thirties or the "elderly" man of forty. With greater awareness of actual age, students might better anticipate the concerns of their patients.

ESTIMATES OF IMPORTANCE OF ENVIRONMENT

The items sampling the area of environment relate primarily to the *social* environment of the patients, and the items most frequently overestimated in importance were communication items such as the following: "To have the nurses take enough time to talk with me," or "To have the nurses talk about things which interest me." Both at the time of the interviews and when talking with groups of the same students a year later, the students stated that these were items which were important to all patients and that these were the things which had been stressed throughout their nursing. Some students seemed almost indignant to learn that the patients felt that these items were less important than they did.

In considering the general pattern of response to these items, the following questions might be considered:

1. Do students confuse "just talking" with conversation with a purpose? It would appear from the study and from remarks made by the students both at the time of the study and later that this might be true.[11]

"Talking is stressed so very much as 'so important,' and *it is* real, real important to have someone talk to you."

"We've been told this—to talk to patients, to give them something to do."

"It's stressed so much just 'to talk' and we feel we're neglecting the patients if we're not able to."

"We've had so much emphasis on the psychological and emotional care all the way through, but the words we use aren't the ones you used in these questions."

It is quite conceivable that in talking about the so-called "psychological needs" of all patients, students may not recognize that some patients may wish to talk, others to listen and still others to refrain from conversation and that the subject of conversation may be either patient or nurse initiated.

The importance of a pleasant, friendly atmosphere, and of talking with patients was also emphasized by the free responses of students, and would suggest

[11] The study director met with five groups of senior students and with groups of faculty and supervisory personnel in each of the participating schools in December, 1958 and January, 1959. The students had participated in the study as freshmen and were asked to consider and discuss some of the findings of the study.

that the learning activities of the student have stressed this aspect of patient care.

2. Do teenagers find it difficult to conceive of people not wanting to talk?

"These items all refer to talking. We think we'd be bored just lying in bed, but maybe if we were ill, we wouldn't want to talk so much."

"Maybe when people get older they don't want to talk as much as we do."

Or, as some faculty members have commented, "Perhaps this is a combination of the age and health of the student, and they look at talking differently than do patients."

Since faculty and supervisory personnel attributed even greater importance to these items of environment than did the students, it would seem unwarranted to assume that the age of the student was a major factor influencing their estimates of the importance of these items to their patients.

3. Do students have difficulty synthesizing and using information which has been acquired from various sources?

To know how patients will respond to items of environment may require certain information which is not obvious to the student. For example, one would need to know something about the patient's home, family, and usual activities in order to estimate the importance to the patient of having the room or ward quiet, or of having other patients talking to him. Even though schools have made much progress in clinical teaching, discussions about patients may tend to elicit isolated facts rather than encourage the students to synthesize information which they have gained in various ways.

It is hoped that both the findings and the questions which have been raised may prove useful and stimulating to faculty and supervisory personnel who are engaged in helping students acquire communication skills.

ESTIMATES OF IMPORTANCE OF PHYSICAL CARE

Two types of speculation might account for the tendency of students to underestimate the importance of items relating to the physical care given by the nurse. The first type is concerned with the student's attempt to resolve self-conflict arising in the work situation; the second, with the student's regard for certain activities of the nurse.

To pursue the first type of speculation, there is adequate reason to assume that students feel guilty when unable to give the type or quality of care they would like to give and consequently have need to underestimate the importance of such care to their patients.

Students frequently stated that these were things they had been taught to do but that there wasn't time to do everything and they did only the important things. Others said that it would be nice to give backrubs if they had time but since they had come into nursing they had learned to be "more objective" and knew that backrubs were less important than they had considered them to be previously. Specific comments also indicated students need to justify their own activities.

"Most patients are up a lot and don't need luxury care, and the patients who are real sick don't even want to turn for a backrub."

"The patients understand we're busy and they say, 'Don't bother to give me a backrub,' so we think it's not important to them. I can't understand why they still say that it *is* important."

"We think in terms of whether the patient needs immediate attention and who can best wait. The patient can't judge this and maybe thinks it more important—to have the nurse come promptly—than it really is."

Since the use of rationalization would be an attempt to minimize feelings of guilt which arise in the busy ward situation, is it possible to help students achieve a solution which is more satisfying both to them and to their patients? Teachers and supervisors might wish to consider methods and activities which would enable the student to look at her use of time on the ward and to determine both the effectiveness and realism of her planning.

Activities might be designed to help students answer the following questions: How much time do I have on the ward? How many patients are assigned to me? What does each patient consider most important in his care? What do I consider most important in his care? How can I distribute the time available to provide the maximum amount of uninterrupted time with each patient and give the care which is important to and for the patient?

The second type of speculation relates to the prestige attached by students to certain activities of the ward. The physical care and self care items relate to the very ordinary, everyday occurrences of the ward such as food, sleep, elimination, skin care, relief of discomfort, and promptness in attending to the requests of patients. Since all are relatively simple things which require only elementary technical skills, it is conceivable that students consider them the more menial activities, regard them with minimal prestige, and attach to them lesser importance than do patients. This line of reasoning would be supported by the free responses of students written prior to any questioning about specific patients.[12] Only one-fourth of their statements were in any way related to the physical care of the patients.

Both by questionnaire response and by comments, head nurses, supervisors, and instructors assigned greater value to these items than did students. And though they mentioned the time limitations of the ward situation, they stressed the patients' reaction to physical care and spoke of the letters of praise or complaint which were received from patients following discharge.

Many nursing activities are relatively nontechnical in nature. Hence it would be useful if both teaching and supervisory personnel tried to determine how students regard these activities, and to consider how they could help students derive personal satisfaction when carrying out simple procedures which patients regard as highly important.

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[12] The instructions were: "List the things which you think would be most important to you (if you were a patient) in the medical care, nursing care or environment."

ESTIMATES OF IMPORTANCE OF INFORMATION AND ASSURANCE

There are many theories which might partially explain why students tended to underestimate the importance ascribed by their patients to information and to events which might contribute to the patient's feeling of security and confidence. Rather than attempting to explore all of them it might be more profitable to consider the students as late adolescents and postulate the effect of the nursing school and hospital on the characteristic behavior and responses of students of this age group.

Most of the students in the study could be thought of as either late adolescents or young adults. If they were not unlike other students of similar age, they could be considered to be dependent upon their families for financial support; basically egocentric in their concerns; unsure of, or questioning religious philosophy; expected to behave as adults, and anxious to be accorded adult recognition and status. But in the setting of the nursing school and hospital, there are many elements which add to or exaggerate the insecurity of the young adult. For within the school the student has been told that she is learning a professional role which demands knowledge of health and disease, understanding of self, coworkers and patients, techniques and procedures which will assure safe care, and the information and skill required to teach patients. All these are the things which the young adult is most anxious to learn and to do.

But in the hospital, what is the status of the student of nursing? She is hedged in by the rules and policies which govern her behavior and that of her patients, by doctors who want the nurse to teach patients and those who will not permit her to teach their patients, by patients who ask questions which she cannot, or is forbidden to answer, and by teachers and supervisors who expect her to appreciate the patient's concern for family, finances, religion, or work. Certainly, these elements in nursing would add to the student's uncertainty of personal status and role and could adequately account for those responses which indicated lack of awareness of the attitudes expressed by patients.

The students frequently commented about the items in this area and by their remarks indicated much of their own insecurity and their dependence upon the patient for understanding their problems. They repeatedly told the interviewers that, "We always explain everything to our patients," or "All patients want reassurance," and "As seniors, we know how important emotional support is to our patients." Yet the same students might say that an item wouldn't be important to the patient, because *he knew* the hospital rules and knew that visitors would interfere with the nurse's schedule.

The adolescent's views of religion might well be portrayed by the following statements:

> "In class this was stressed a lot and the minister and priest told us how important this was to patients. Frankly, I was very disappointed when I didn't see any of it emphasized in the hospital."

"Patients don't usually talk to us about religion. I think they associate a minister with death and if the minister comes they think they're going to die."

"If I were a patient, I'd be a little shook up if a minister came in."

"It's so controversial we just don't talk about religion."

In relation to patients' financial problems, students in the three tax-supported hospitals frequently said:

"Perhaps some of our older patients might have financial difficulties, but most patients here are on the county and we feel it's not so important to them."

In the nongovernmental hospitals, the students were more apt to say:

"He wouldn't worry about bills; he's an electrician and gets good pay."

"He has hospitalization and doesn't need to worry."

Perhaps students made some comments in an effort to gloss over situations which they felt they could not change:

"They could be afraid to show us they're afraid to be in the same room with a dying patient."

"Some patients might know it was selfish to want to have a very sick patient moved, so they won't say this to us."

Could it also be that some were "nuisance" items to the student and, since they interrupted her work, they could not be rated as important to patients?

"We aren't on the wards when they have visitors, but if it were very important to see their family, they'd say so."

"They know it would interfere with the nurse's schedule to have someone stay after visiting hours, so, of course, it isn't important to them."

Although the preceding material has pointed out reasons why young adults might find it difficult to recognize the attitudes of patients, it cannot be assumed that the nurse will acquire this ability merely by becoming older. Instead, it may well be that teachers and supervisors need to continue to study the students whom they are teaching, their methods of instruction, and their own teaching skills. It does not require too much imagination to recognize that innumerable studies might be focused on the type of assistance and experience needed by the student if she is to systematically acquire skill in recognizing and meeting the human needs of patients as well as to master the theory and principles presented in textbooks, lectures, and discussions. Such studies might indicate the need for the reassignment of teachers, thus permitting those teachers who are most skilled in their relationships with patients to work with students on the ward, and assigning those with more limited skills to assist students in the classroom.

If future studies were contemplated, further refinement and simplification of the card sort or questionnaires would make it feasible to include other groups of nursing personnel and to control the selection of patients. Certainly it would be both fascinating and useful to know which group of hospital workers is best able to recognize the attitudinal differences among patients.

References

References relating to empathy studies, Q sort techniques and nurse-patient relationships contributed specific information, ideas and techniques which were invaluable in the development of the Study of Student Nurse Perception of Patient Attitudes. Empathy studies: (1) provided definitions of empathy and projection, (2) suggested various techniques for measuring empathic ability, (3) described methods of scoring responses, (4) identified various factors which might influence the prediction of responses, and (5) listed criteria which must be met by a good prediction test.

Articles describing the Q sort were useful in pointing out both the advantages and limitations of "forced" sorts and supporting the decision to use a "free" sort technique.

References pertaining to nursing students and patients suggested ways of selecting areas common to the experience of both students and patients. Each of the references on the following page was useful during some phase of the study.

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APPENDICES

APPENDIX A

ITEMS USED FOR "IMPORTANCE" SORT

Area I: Environment (Physical and Social)

Item No.	
	A. PHYSICAL
2	To have the room or ward quiet.
16	To have my bed screened or the door closed when I'm getting a bath or the doctors are examining me.
	B. SOCIAL
5	To have the nurses take enough time to talk with me.
7	To have patients talk with me.
10	To have nurses use my name when they are talking with me.
14	To have the nurses talk about things which interest me.
17	To have nurses who are friendly.
20	To feel that the people here are interested in my getting well.
26	To have doctors and nurses listen to what I have to say.
28	To have residents and interns who are friendly.

Area II: Physical Care or Activities

	A. PROVIDED BY OTHERS
3	To have the nurse rub my back often enough.
8	To have the nurse do something about it when I'm uncomfortable.
13	To be served a food tray that makes me feel like eating.
22	To have the nurse come promptly when I call.
24	To get my medicines on time.
32	To have the nurses finish what they are doing and not run in and out.
	B. CARRIED ON BY THE PATIENT
1	To be permitted to smoke.
6	To be able to get up and go to the bathroom instead of using the bedpan.
11	To be able to sleep.
19	To be permitted to sleep as long as I want to in the morning.
23	To have something to do to occupy my time.

ITEMS USED FOR "IMPORTANCE" SORT—Continued

Area III: Information and Assurance

Item No.	
	A. KNOWLEDGE OR UNDERSTANDING OF ILLNESS OR CARE
25	To understand what the doctors and nurses are talking about when they try to explain my case to me.
30	To have someone explain all tests which are new to me.
31	To understand why I'm getting my medicines.
33	To know which nurse is assigned to take care of me.
34	To know how long I will be in the hospital.
	B. ASSURANCE (SECURITY OR CONFIDENCE)
	(1) Provided by hospital personnel.
4	To have the nurses look in on me when I'm sleeping.
12	To have patients who are very ill moved somewhere else.
15	To have the doctors tell me the truth about my illness.
29	To know that the nurse will come if I need her.
	(2) Provided by others.
9	To see my family or friends often enough.
18	To permit someone of my family or a special friend to stay after visting hours if I really want them.
21	To have the minister, priest or rabbi visit me.
27	To be free of worry about bills piling up when I'm sick.

APPENDIX B

ITEMS USED FOR "YES-NO" SORT

Area I: Environment (Physical and Social)

Item No.	
	A. PHYSICAL
2	The room or ward is usually quiet.
16	My bed is screened or the door is closed when I'm getting a bath or the doctors are examining me.
	B. SOCIAL
5	The nurses take enough time to talk with me.
7	There are patients who talk with me.
10	The nurses use my name when they are talking with me.
14	The nurses talk about things which interest me.
17	The nurses are friendly.
20	I feel that the people here are interested in my getting well.
26	The doctors and nurses listen to what I have to say.
28	The residents and interns are friendly.

Area II: Physical Care or Activities

	A. PROVIDED BY OTHERS
3	The nurses rub my back often enough.
8	The nurses do something about it when I'm uncomfortable.
13	I am served a food tray which makes me feel like eating.
22	The nurse comes promptly when I call.
24	I get my medicines on time.
32	The nurses finish what they are doing and don't run in and out.
	B. CARRIED ON BY THE PATIENT
1	I am permitted to smoke.
6	I am able to get up and go to the bathroom.
11	I am able to sleep.
19	I am permitted to sleep as long as I want to in the morning.
23	I have things to do which occupy my time.

ITEMS USED FOR "YES-NO" SORT—Continued

Area III: Information and Assurance

Item No.

A. KNOWLEDGE OR UNDERSTANDING OF ILLNESS OR CARE

25 I understand what the doctors and nurses are talking about when they try to explain my case to me.

30 All tests which were new to me were explained.

31 I understand why I am getting my medicines.

33 I know which nurse is assigned to take care of me.

34 I know how long I will be in the hospital.

B. ASSURANCE (SECURITY OR CONFIDENCE)

(1) Provided by hospital personnel.

4 The nurses look in on patients when they are sleeping.

12 Patients who are very ill are moved somewhere else.

15 The doctors tell me the truth about my illness.

29 I know that the nurse will come if I need her.

(2) Provided by others.

9 I see my family or friends often enough.

18 Someone of my family or a special friend is permitted to stay after visiting hours if I really want them.

21 The minister, priest or rabbi visits me.

27 I worry about bills piling up when I'm ill.

APPENDIX C

CHARACTERISTICS OF 1958 PATIENT POPULATION

School	Total number of patients	Race		Sex		Type of service	
		White	Nonwhite	Male	Female	Medical	Surgical
Total	153	146	7	68	85	77	76
D1	13	11	2	6	7	6	7
D2	21	20	1	11	10	12	9
D3	15	15	.....	7	8	9	6
E	20	19	1	10	10	11	9
F	44	41	3	16	28	16	28
G	40	40	.....	18	22	23	17

School	Total number of patients	Age group								First time in hospital?	
		Under 20	20–29	30–39	40–49	50–59	60–69	70–79	80+	Yes	No
Total	153	4	8	17	38	35	30	17	4	54	99
D1	13	.....	1	2	1	3	3	2	1	3	10
D2	21	.....	3	3	7	5	3	.....	.....	7	14
D3	15	.....	.....	1	6	3	3	1	1	5	10
E	20	1	1	3	2	3	6	3	1	9	11
F	44	1	2	4	13	13	5	6	.....	14	30
G	40	2	1	4	9	8	10	5	1	16	24

APPENDIX D

INTERVIEWER'S RATING OF PATIENT BEHAVIOR

School	Total number of patients	Number of patients who asked					Interviewer did not check question
		Very many questions	Many questions	Some questions	A few questions	No questions	
Total	153	2	8	38	55	49	1
D1	13	.....	.....	3	7	3	.....
D2	21	1	1	8	8	3	.....
D3	15	.....	2	6	5	2	.....
E	20	.....	3	7	9	1	.....
F	44	.....	1	6	10	26	1
G	40	1	1	8	16	14	.....

School	Total number of patients	Number of patients who volunteered varying amounts of information					Interviewer did not check question
		A great deal	Much	Some	A little	None	
Total	153	24	28	61	34	5	1
D1	13	2	2	5	4	.....	.....
D2	21	1	4	8	8	.....	.....
D3	15	4	4	6	1	.....	.....
E	20	2	2	11	5	.....	.....
F	44	10	7	16	8	2	1
G	40	5	9	15	8	3	.....

School	Total number of patients	Number of patients who at the beginning of the interview seemed to be					Interviewer did not check question
		Eager	Pleased	Willing	Suspicious	Fearful	
Total	153	11	45	88	7	1	1
D1	13	.....	5	8	.....	.....	.....
D2	21	2	7	12	.....	.....	.....
D3	15	1	7	7	.....	.....	.....
E	20	2	6	10	2	.....	.....
F	44	3	11	26	2	1	1
G	40	3	9	25	3	.....	.....

APPENDIX D

INTERVIEWER'S RATING OF PATIENT BEHAVIOR—Continued

School	Total number of patients	Number of patients who during the interview seemed to					Interviewer did not check question
		Thoroughly enjoy it	Enjoy it	Like it	Dislike it	Thoroughly dislike it	
Total	153	31	62	55	3	1	1
D1	13	1	6	6	.....	.....	.....
D2	21	1	12	7	1	.....	.....
D3	15	3	7	5	.....	.....	.....
E	20	2	8	10	.....	.....	.....
F	44	14	14	14	1	.....	1
G	40	10	15	13	1	1	.....

School	Total number of patients	Number of patients who appeared to be					Interviewer did not check question
		Very fatigued	Fatigued	Not tired	Alert	Very alert	
Total	153	4	18	40	43	47	1
D1	13	.....	2	4	4	3	.....
D2	21	1	3	2	7	8	.....
D3	15	1	1	3	6	4	.....
E	20	.....	6	6	5	3	.....
F	44	1	4	18	9	11	1
G	40	1	2	7	12	18	.....

School	Total number of patients	Number of patients with whom the interview was					Interviewer did not check question
		Very easy	Moderately easy	Easy	Somewhat difficult	Difficult	
Total	153	70	38	21	20	3	1
D1	13	3	4	2	4	.....	.....
D2	21	8	6	4	3	.....	.....
D3	15	4	8	1	2	.....	.....
E	20	10	4	3	2	1	.....
F	44	25	7	8	2	1	1
G	40	20	9	3	7	1	.....

APPENDIX D

INTERVIEWER'S RATING OF PATIENT BEHAVIOR—Continued

School	Total number of patients	Did the patient seem to answer in a superficial or offhand manner?		Interviewer did not check question
		Yes	No	
Total	153	15	135	3
D1	13	.....	12	1
D2	21	3	18	.....
D3	15	1	14	.....
E	20	1	19	.....
F	44	4	39	1
G	40	6	33	1

APPENDIX E

RANK ORDER OF ITEMS DIFFERENTIATING BETWEEN 20 STUDENTS (UPPER 1/10) EARNING HIGHEST AND 19 STUDENTS (LOWER 1/10) EARNING LOWEST IMPORTANCE SCORES (1958)

Item	Area	Rank	Percentage difference between high and low scores	Percentage of responses agreeing with patient	
				Students earning upper 1/10 of scores	Students earning lower 1/10 of scores
16	I	1	69	80	11
31	III	3	59	75	16
3	II	3	59	75	16
24	II	3	59	75	16
14	I	5	49	70	21
11	II	7.5	44	70	26
12	III	7.5	44	60	16
28	I	7.5	44	60	16
21	III	7.5	44	55	11
15	II	10	43	37	80
10	I	11	40	5	45
5	I	12	39	55	16
13	II	12	39	60	21
33	III	12	39	60	21
18	III	15	35	40	5
4	III	16	34	55	21
34	III	16	34	50	16
17	I	18	33	70	37
7	I	19.5	29	50	21
6	II	19.5	29	50	21
22	II	22	28	65	37
25	III	22	28	60	32
1	II	22	28	60	32
32	II	24	24	50	26
19	II	25	19	30	11
20	I	26	18	55	37
29	III	27	17	65	48
27	III	28	13	55	42
26	I	29	8	50	42
30	III	30.5	8	50	42
23	II	30.5	8	50	42
2	I	32	3	35	32
8	II	33	2	60	58
9	III	34	3	50	53

APPENDIX F

INDICES OF SATISFACTION AND IMPORTANCE

The material in this section has been placed in the appendix rather than the text because: (1) Both patient and student responses to the "Yes-No" Sort have been regarded as unreliable. Hence, extensive use of these data would appear unwarranted. Furthermore no interpretation has been made of the findings described in this section. (2) The indices are derived from grouped data rather than from individual comparisons as are all other comparisons of patient and student response.

The data used for these indices were provided by combining the responses of 151 patients and of 204 students who participated in the study during the spring of 1958.

The Satisfaction Index indicates the proportion of patients and students who responded to each of the "Yes-No" items in a manner favorable to the existing situation. All patient responses were included which indicated patient satisfaction but the only student responses which were used were those which recognized that the patient would express satisfaction. This index provides some indication of the similarities and differences between the perception of patients and nurses.

The Importance Index indicates the proportion of patients and students who rated each of the Importance items as "Very Important" or "Important." Again, only those responses of the student were used which *agreed* with the responses of the patient.

[See pages 74 and 75.]

A *larger proportion of patients than students* indicated that the following items were *Very Important* or *Important* to patients and responded to the same items of the "Yes-No" sort in a manner which was *favorable* to the existing situation.

Area	Items	Importance index		Satisfaction index	
		"Very important" or "Important" stated by patient or recognized by student—percentage of		"Yes-No" responses indicate satisfaction of patient or recognition of satisfaction by student—percentage of	
		Patients	Students	Patients	Students
I	10. To have nurses use my name when they are talking with me.	52	46	99	94
	16. To have my bed screened or the door closed when I'm getting a bath or the doctors are examining me.	92	85	99	96
	28. To have residents and interns who are friendly.	92	66	100	97
	2. To have the room or ward quiet.	64	61	86	59
II	3. To have the nurse rub my back often enough.	71	53	95	83
	6. To be able to get up and go to the bathroom instead of using the bedpan.	91	77	57	50
	13. To be served a food tray that makes me feel like eating.	97	89	88	73
	22. To have the nurse come promptly when I call.	93	87	91	73
	24. To get my medicines on time.	88	70	100	94
	32. To have the nurses finish what they are doing and not run in and out.	76	37	90	52
	19. To be permitted to sleep as long as I want to in the morning.	29	22	55	11
III	12. To have patients who are very ill moved somewhere else.	79	53	61	44
	18. To permit someone of my family or a special friend to stay after visiting hours if I really want them.	67	58	82	59
	21. To have the minister, priest or rabbi visit me.	71	43	70	42
	27. To be free of worry about bills piling up when I'm sick.	90	83	49	40
	31. To understand why I'm getting my medicines.	88	69	93	78
	4. To have the nurses look in on me when I'm sleeping.	65	52	87	83
	15. To have the doctors tell me the truth about my illness.	98	96	99	88
	30. To have someone explain all tests which are new to me.	90	87	84	76

Area	Items	Importance index		Satisfaction index	
		"Very important" or "Important" stated by patient or recognized by student—percentage of		"Yes-No" responses indicate satisfaction of patient or recognition of satisfaction by student—percentage of	
		Patients	Students	Patients	Students
	A *similar proportion of patients and students* indicated that the following items were *Very Important or Important* and responded to the "Yes-No" items in a manner favorable to the existing situation.				
I	17. To have nurses who are friendly.	98	100	99	99
	20. To feel that the people here are interested in my getting well.	96	97	99	97
	26. To have the doctors and nurses listen to what I have to say.	94	96	98	97
II	8. To have the nurse do something about it when I'm uncomfortable.	99	99	99	96
	11. To be able to sleep.	98	97	77	76
III	25. To understand what the doctors and nurses are talking about when they try to explain my case to me.	95	96	95	93
	29. To know that the nurse will come if I need her.	100	99	99	98
	33. To know which nurse is assigned to take care of me.	45	46	62	66
	A *smaller proportion of patients* than students indicated that the following items were *Very Important or Important* to patients, although a *larger proportion of patients than students* indicated that patients would respond to the "Yes-No" items in a manner *favorable* to the existing situation.				
I	5. To have the nurses take enough time to talk with me.	55	86	97	90
	7. To have patients talk with me.	55	65	86	79
	14. To have the nurses talk about things which interest me.	63	71	89	85
II	23. To have something to do to occupy my time.	71	76	83	53
	1. To be permitted to smoke.	37	42	84	84
III	9. To see my family or friends often enough.	92	97	87	52
	34. To know how long I will be in the hospital.	76	92	38	34

APPENDIX G

ITEMS LISTED BY STUDENTS IN RESPONSE TO QUESTION: "LIST THE THINGS WHICH WOULD BE MOST IMPORTANT TO YOU (IF YOU WERE A PATIENT) IN THE MEDICAL CARE, NURSING CARE OR ENVIRONMENT."

ITEM	Number of responses
TOTAL NUMBER OF RESPONSES IN ALL AREAS	1,960
I. ENVIRONMENT—Total	1,031
A. Physical—Total	396
1. Pleasant, cheerful, comfortable room	107
2. Clean, neat room	100
3. Quiet	64
4. Good equipment and facilities	35
5. Privacy	31
6. Clean, neat beds	26
7. Ventilation	12
8. Single or private room	11
9. Ward	4
10. Reasonable cost	6
B. Social—Total	635
1. Doctors who know and like me as a person	120 [2]
2. Friendliness of all personnel	112 [1]
3. Nurses who are friendly, cheerful, pleasant	92 [1]
4. A competent efficient staff	71
5. Nurses who are understanding	59 [2]
6. Nurses who have time enough to talk with patients	58
7. Patients friendly, able to talk	25
8. Staff works together	15
9. Nurses who are interested in me as a person	15 [2]
10. Friendly and kind doctors	14 [1]
11. Miscellaneous	54
(a) Not cold, snippy, overly sweet	
(b) Not a guinea pig	
(c) Treat as an intelligent person	
(d) No racial discrimination	
II. PHYSICAL CARE—Total	540
A. Given or Provided for by Nurse—Total	488
1. General hygienic care (total)	60
(a) Personal hygiene	17
(b) Bath	18
(c) Backrub	12
(d) Mouthwash or brushing of teeth	11
(e) Hair combed daily if unable to do so myself	2
2. Adequate nursing care	70
3. Skilled nursing care	62
4. Miscellaneous (total)	296
(a) Food	95
i. GOOD, HOT, PALATABLE, ATTRACTIVE	89
ii. SOME CHOICE	2
iii. COLD WATER IN PITCHER	4
(b) Comes promptly	54
(c) Uses good techniques	37
(d) Medications and treatments on time	31
(e) Opportunity for rest	29
(f) Does little things for me	15
(g) Is careful and gentle when caring for patients	10
(h) Given "good" and "modern" medications	8
(i) Opportunity to sleep in AM	6
(j) Flexible routine	5

[1] Total responses relating to friendly, cheerful hospital personnel—218.

[2] Total responses relating to understanding or knowing patient as a person—194.

ITEM	Number of responses
(k) Given uninterrupted care	5
(l) Warms bedpan	1
B. Self Care or Activity—Total	52
1. Something to occupy time	43
2. Do as much for self as possible	9
III. INFORMATION AND ASSURANCE—Total	389
A. Information and Explanation—Total	226
1. Doctors, nurses or other personnel to tell me what is being done for me and why	103
2. Nurses who explain procedures and hospital routines and answer questions	78
3. Doctors who tell me about my illness	29
4. Nurses who teach me to care for myself	11
5. Doctors who explain tests to me	5
B. Assurance or Personal Security—Total	163
1. Doctors I could trust or have confidence in	62
2. Nurses in whom I can have confidence	31
3. Visitors treated kindly and more liberal visiting hours	25
4. Doctors and nurses who are truthful	20
5. Segregation of very ill patients	8
6. Nurses who respect patients' confidences	7
7. Spiritual advisor	4
8. Help with financial problems	3
9. Tell patient about illness; not let him find out from doctors talking in the hall	2
10. Knowledge of family wellbeing	1